

# **Big Thorne EIS Record of Decision Appendix 2**



# Appendix 2

## Road Card Introduction

This introduction is provided to supplement the information given in each of the road cards. The road cards provide road management objectives for each National Forest System (NFS) road. A map accompanies each road card. Proposed new roads include a map for each alternative.

### Road Management Objectives

#### Purpose and Use

The road management objectives (RMOs) presented in this appendix establish the intended purpose and display the design, maintenance, and operation criteria (per FSH 7709.55) for proposed roads within the Big Thorne project area. Site-specific design criteria are discussed in the second section of the RMOs; these will be used during design, construction, and initial monitoring of any road work proposed in this document. For proposed roads and roads proposed for reconstruction, a map is provided that shows the proposed road location and identification of areas discussed in the site-specific design criteria. Site-specific design criteria include road location objectives, wetland information, erosion control, and proposed rock borrow sources. Streams within the project area with proposed construction rehabilitation of stream crossing structures are shown on maps for existing roads.

#### General Design Criteria

The general design criteria provide various descriptions of the type of road and the intended purpose and future use of the road. Three Functional Classes are used by the Forest Service. They are: arterial, collector, and local. Arterial roads function as mainlines, with collectors feeding traffic to arterials, and locals feeding traffic to collectors. Service Life indicates duration of road use. Choices are Short-term (less than 10 years) or Long-term. Long-term is used in conjunction with the entry cycle. The choices are Long-term Constant or Long-term Intermittent. The roads on the island are listed as Long-term Intermittent (LI). Maintenance and operation criteria are developed from functional class, service life and other general design criteria.

#### Maintenance Criteria

The maintenance criteria include a discussion of how the road is to be maintained, centering on three strategies. The three maintenance strategies are:

**Active:** Provide frequent cleanout of ditches and catch basins to ensure controlled drainage. Control roadside brush to maintain sight distance. Grade as needed to maintain crown and running surface.

**Stormproof:** Provide water bars, rolling dips, out sloping, etc., to ensure controlled runoff until any needed maintenance can be performed on the primary drainage system. Control roadside brush to maintain passage.

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**Storage:** The process/action of closing a road to vehicle traffic and placing it in a condition that requires minimum maintenance to protect the environment and preserve the facility for future use.

Maintenance levels and traffic service levels are discussed in the Draft EIS, Chapter 3, Transportation section. The operational maintenance level is the current or planned condition and is the level during timber harvest. Objective maintenance level is the desired condition after harvest activities are completed.

The active maintenance strategy is applied to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities. These roads are assigned Maintenance Level 3. The active maintenance strategy will also at times be applied to roads intended only for use by high-clearance vehicles, or Maintenance Level 2 roads. This will usually be the case when log haul is expected in the near future.

An intermediate maintenance strategy is to stormproof or stabilize the road by providing roadway features, such as drivable water bars, and out sloping to control runoff in case the primary drainage system of culverts and ditches is overwhelmed during a storm event. Each culvert will be evaluated as to where the water would go if the culvert were to fail to carry the high flow. A water bar or out slope at this location will minimize the potential of erosion of long stretches of ditch line or roadway. This is intended to be the primary maintenance strategy applied to roads assigned Maintenance Level 2.

**Storage** is intended to be the primary maintenance strategy on intermittent use roads during their closure cycle. Road storage is defined in FSH 5409.17 as the “the process/action of closing a road to vehicle traffic and placing it in a condition that requires minimum maintenance to protect the environment and preserve the facility for future use.” Maintenance Level 1, closure and basic custodial maintenance, is assigned. Road storage will follow all National Core BMPs, especially National Core BMP Road-6 (Road Storage and Decommissioning). Items of importance are as follows:

- Evaluate all stream and waterbody crossings for potential for failure or diversion of flow if left without treatment.
  - Use suitable measures to reduce the risk of flow diversion onto the road surface.
  - Consider leaving existing crossings in low-risk situations where the culvert is not undersized, does not present an undesired passage barrier to aquatic organisms, and is relatively stable. (\* For the Big Thorne project all culverts that do not meet fish passage standards (red pipes) would be removed during road storage).
  - Remove culverts, fill material, and other structures that present an unacceptable risk of failure or diversion.
  - Reshape the channel and streambanks at the crossing-site to pass expected flows without scouring or ponding, minimize potential for undercutting or slumping of streambanks, and maintain continuation of channel dimensions and longitudinal profile through the crossing site.

- Use suitable measures to avoid or minimize scour and downcutting.
- Use suitable measures to ensure that the road surface drainage system will intercept, collect, and remove water from the road surface and surrounding slopes in a manner that reduces concentrated flow in ditches, culverts, and over fill slopes and road surfaces without frequent maintenance.
- Use suitable measures to stabilize unstable road segments, seeps, slumps, or cut or fill slopes where evidence of potential failure exists.

The Forest Service has reviewed each of the roads that will be utilized for this project to determine if an earlier closure is necessary for other resource concerns instead of the timeframe of 1 to 5 years after harvest. From this review the Forest Service developed a prioritization of the roads that will be closed after harvest and not within the 1 to 5 year timeframe. This prioritization is an appendix to the ROD and is located in the project record.

### **Operation Criteria**

The operation criteria include a presentation of each of the five traffic management strategies identified in FSM 7731 (encourage, accept, discourage, prohibit, and eliminate) to be applied to different traffic classes on each road. The traffic management narrative describes what actions will be taken in order to apply each strategy. For example, if the strategy “eliminate” is prescribed for standard passenger and high-clearance vehicles, the narrative describes the method to accomplish this, such as removal of stream crossing structures, gating, etc. Travel management strategies are discussed in greater detail in Chapter 3, Transportation.

### **Site-specific Design Criteria**

The site-specific design criteria include road location objectives, wetland information, erosion control, proposed rock borrow sources, and all streams within the project area with proposed construction or rehabilitation of stream crossing structures. The road location discussion documents why the road is proposed in a specific location, control points, and alternative routes considered (if any). A main location objective is to avoid crossing wetlands. At times, however, it is necessary to cross wetlands in order to minimize the total impact of a road. These areas are discussed, documenting areas of mapped wetlands and why the road is located across these areas.

All fish streams are identified, as well as non-fish streams with sufficient flow to require a 48-inch or larger culvert. Prior to actual construction of roads and stream crossings, the final location, structure type, and design criteria are designed to meet all applicable Forest Plan Standards and Guidelines, Forest Service Manual and Handbooks, best management practices and MOUs with Alaska Department of Fish and Game (when applicable). All culverts that do not meet fish passage standards (red pipes) would be removed during road storage.

Various stream surveys were used for the effects analysis for the FEIS and the ROD. These surveys consisted of unit surveys, upstream assessments, road condition surveys, watershed improvement tracking surveys, and Alaska Fish and Game Anadromous Catalog surveys. However, not all of this data has been updated in the Forest Service's

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GIS stream layer that was used to create the road card maps. Therefore, the road card maps may not always correspond to the road card text. The text is based on the most up-to-date survey data while the map depicts GIS data which does not contain all survey data.

### Operational and Objective Maintenance Levels

Operational Maintenance Levels indicate the level of road maintenance during sale-related activities. Objective Maintenance Levels indicate the long-term maintenance plan for the roads as described in the following definitions. Maintenance Levels (MLs) discussed in the Road Management Objectives (RMOs) include Maintenance Levels 1 and 2. The definitions for maintenance levels are from the Forest Service Handbook 7709.58. The purpose of the ML is to define the level of service provided by, and maintenance required for, a specific road or segment.

#### Maintenance Level 1

Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period must exceed one year. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Appropriate traffic management strategies are "prohibit" and "eliminate." Roads are closed by barrier, bridge removal or organic encroachment and are monitored for resource protection.

#### Maintenance Level 2

Assigned to roads open for use by high-clearance vehicles. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or other specialized uses. Log haul may occur at this level. Appropriate traffic management strategies are either to (1) discourage or prohibit passenger cars or (2) accept or discourage high-clearance vehicles.

### AFRPA Status

Alaska Forest Resources and Practices Act (AFRPA): Under this Act, all roads will be maintained as "Active" during harvest-related activities. After these activities are completed, the AFRPA classes on the road cards will be implemented. These classes include:

**Active:** A forest road actively used for hauling logs, pulpwood, chips, or other major forest products, or rock and other road-building materials.

**Inactive:** A forest road on which commercial hauling is discontinued for one or more logging seasons, and the forest landowner desires continuation of access for fire control, forest management activities, occasional or incidental use for forest products harvesting, or similar activities.

**Closed:** A road is closed when the following activities have been completed: a road is outslopped or waterbarred, or is left in a condition suitable to control erosion. The ditches are also left in a condition suitable to control erosion, and bridges, culverts, and fills are removed from surface waters.

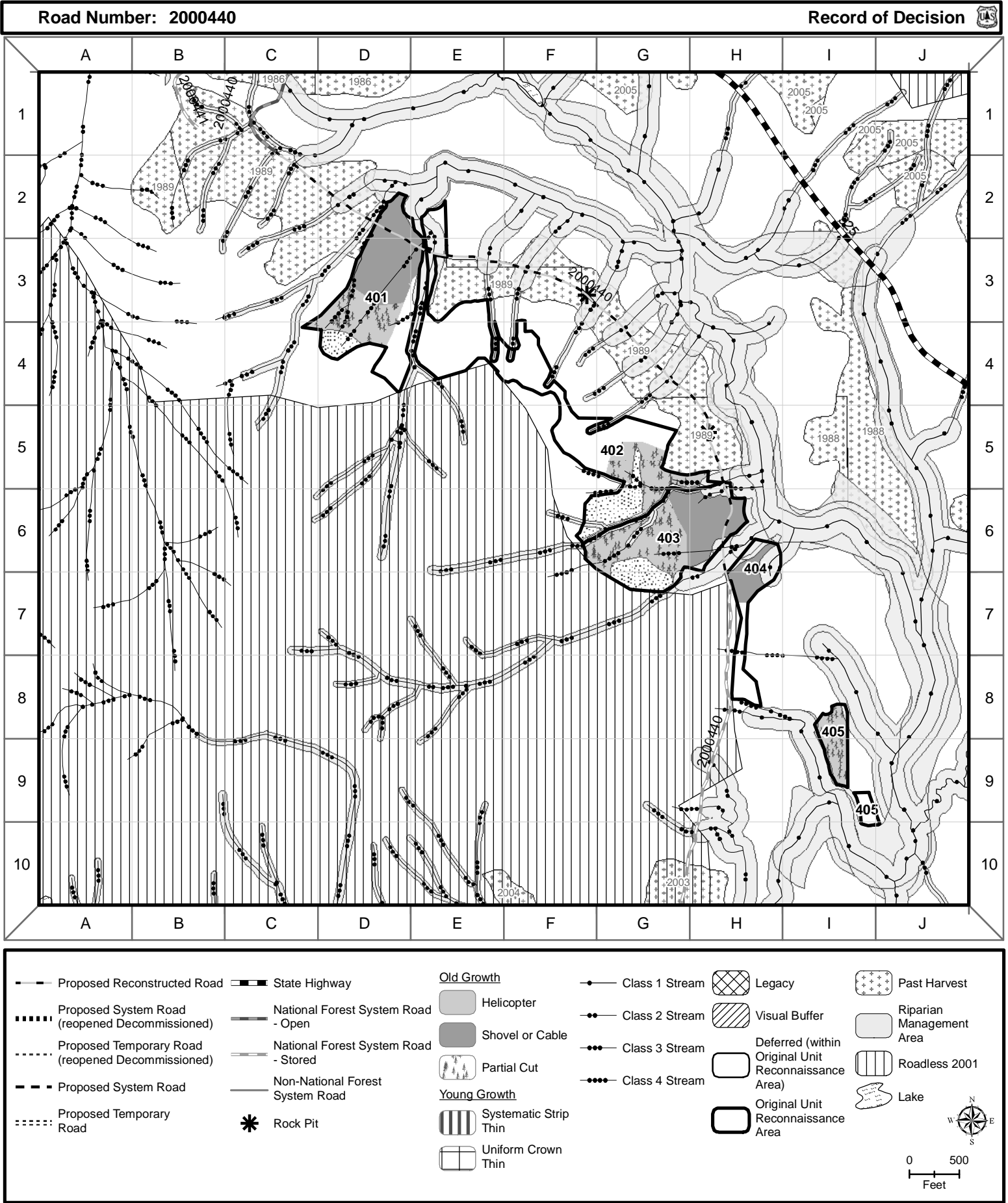
### **Other Resource Information**

The resource information section presents issues of concern (if any) for the following categories: timber/logging systems, wildlife, botany, invasive species, visual/recreation, cultural, lands/minerals/geology/karst, and soils/water. For proposed roads, potential concern exists for lines that pass through high-value deer habitat or soils with a mass movement index ranking of 4 (MMI 4 soils). For existing roads, potential concern focuses soil issues.

### **Best Management Practices (BMPs)**

The National Core BMPs will be implemented in this project. The crosswalk between the National Core BMPs and the Region 10 BMPs are in the project record.

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**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Timber Production  
Modified Landscape  
Non-National Forest

**Route No**  
2000440

**Route Name**

**Begin Terminus**  
2000440 MP 0.75

**End Terminus**  
Unit 595-404

**Begin MP**  
0.75

**Length**  
1.32

**Status**  
Existing

## General Design Criteria and Elements

<b>Functional</b>	<b>Service</b>			<b>Design</b>		
<b>Class</b>	<b>Life</b>	<b>Surface</b>	<b>Width</b>	<b>Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

## Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities road would remain open shown on the Motor Vehicle Use Map, to highway legal vehicles, seasonal from May 1 to November 30 for 1 to 5 years to allow for firewood removal and other incidental uses. At the end of 1 to 5 years road is not designated for public motor vehicle use and would be placed in storage. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

## Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Future Condition)	Alaska Forest Practices Act Class
0.75	2.07	2	1	Active during haul, Inactive while stored

## Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul and firewood removal, road will be stored and maintained in "Inactive" status.

## ATM

**STORAGE/FOOT TRAVEL** A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

## Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road

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<b>Traffic Management Strategies</b>	<b>Encourage:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30
	<b>Accept:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30 Non-motorized use after road is closed year round.
	<b>Discourage:</b>	1 to 5 years after timber sale activities Passenger Vehicle from May 1 to November 30
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

**Travel Management Narrative:**

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

Approved /s/ Rachelle Huddleston-Lorton  
District Ranger

June 28, 2013  
Date

### Site Specific Design Criteria Road 2000440

#### Route Basics:

The purpose of this road is to access Units 595-401, 595-402, 595-403, 595-404 and provide landings for Unit 595-405. The proposed road reconstruction has an approximate length of 1.79 miles. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 2000440. Deferred maintenance may be needed on the parent road including brushing, ditch cleaning, drainage maintenance and spot rocking.

#### Road Location:

Road accesses Units 595-401, 595-402, 595-403 and 595-404. Grades are mostly flat. Location controlled by existing road location. The road does not enter the Kogish roadless area because Unit 595-406 was dropped. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

#### Wetlands:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

#### Erosion Control:

An erosion control plan for reconstruction and maintenance will be developed according to standard project specifications (R10 BMP 14.5 and National Core BMP Road-3). All areas of organic or mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17, 14.11, 14.8 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, and Road-7). Incorporate erosion control and stabilization measures in project plans for stabilizing all human caused soil disturbances. Ensure Best Management Practices can be implemented in reconstruction, operation, and maintenance of the road.

#### Rock Pits:

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6). Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

#### Stream Crossings:

Eleven Class II stream crossings are present along this road segment. Existing stream crossing structures are already in place at every Class II stream crossing and are listed as follows: mile post 0.90 (cell D2; available upstream habitat is 3m), mile post 1.12 (cell E3; available upstream habitat is 138m), mile post 1.22 (cell E3; available upstream habitat is 6m), mile post 1.3 (cell F3; available upstream habitat is 35m), mile post 1.44 (cell F3; available upstream habitat is 52m), mile post 1.51 (cell G4; available upstream habitat is 38m), mile post 1.58 (cell G4; available upstream habitat is 54m), mile post 1.64 (cell G4; available upstream habitat is 42m), mile post 1.88 (cell H5; available upstream habitat is 42m), mile post 2.01 (cell H6; available upstream habitat is 3m), and mile post 2.03 (cell H6; available upstream habitat is 144m). Note: the Class II stream at mile post 1.12 has been surveyed, however, the other ten Class II streams have not been surveyed and rely on GIS for estimating available habitat. Three Class III stream crossings are present along this road segment. Existing stream crossing structures are already in place at every Class III stream crossing and are listed at the following locations: mile post 0.72 (cell C1), mile post 0.80 (cell C2), and mile post 0.96 (cell D2). Note: the Class III stream at mile post 0.96 has been surveyed, however, the other two Class III streams have not been surveyed. Three Class IV stream crossings and multiple non-stream drainages are present along this road segment. Road-stream crossings, stream characteristics, and fish information was based on the most recent RCS data, along with additional survey information. GIS stream locations do not always match the RCS data. All structures that do not meet fish passage standards (red pipes) would be removed during road storage. If necessary, an additional survey would be conducted during storage to determine fish presence and timing restrictions. Instream work related to the crossing, if any, would be carried out under current timing restrictions and concurrence from the State would be solicited prior to starting the work.

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## **Other Resource Information**

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** This road accesses units that are included in the unit pool due to the proposed OGR modifications in Alternative 3 only. No concerns.

**Botany:** No concerns

**Invasive Species:** No concerns

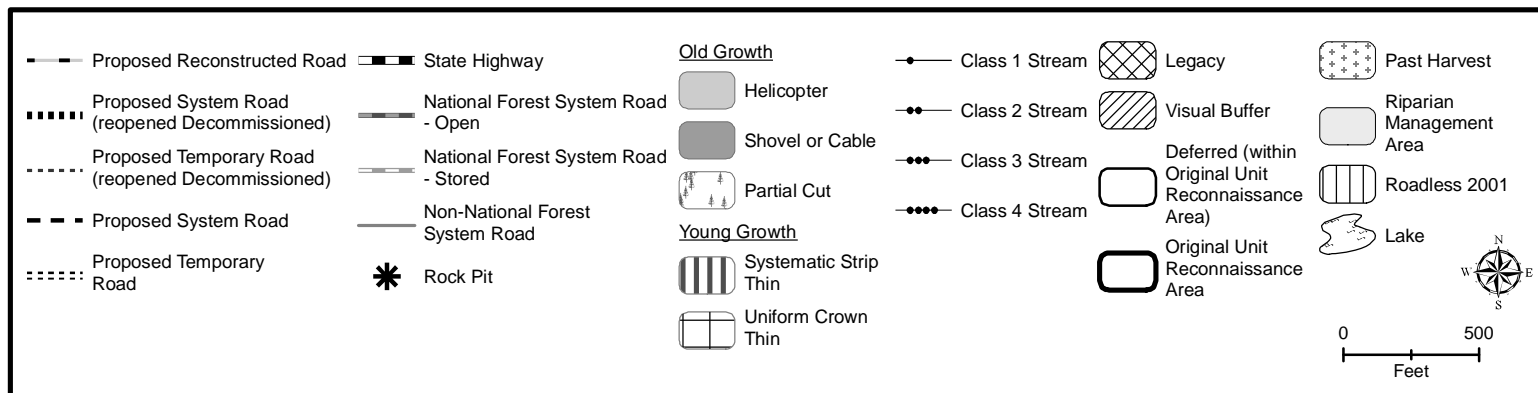
**Lands/Minerals/Geology/Karst:** No concerns

### **Soil and Water:**

Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities plus a period of 1 to 5 years. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** The road does not enter the Kogish roadless area because Unit 595-406 was dropped.

**Heritage Resources:** No concerns



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**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Timber Production

**Route No**  
2030110

**Route Name**

**Begin Terminus**  
2030100 MP 0.19

**End Terminus**  
2030111 MP 0.00

**Begin MP**  
0.00

**Length**  
0.48

**Status**  
Existing

### General Design Criteria and Elements

<b><u>Functional Class</u></b>	<b><u>Service Life</u></b>	<b><u>Surface</u></b>	<b><u>Width</u></b>	<b><u>Design Speed</u></b>	<b><u>Critical Vehicle</u></b>	<b><u>Design Vehicle</u></b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

### Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities road would remain open shown on the Motor Vehicle Use Map, to highway legal vehicles, seasonal from May 1 to November 30 for 1 to 5 years to allow for firewood removal and other incidental uses. At the end of 1 to 5 years road is not designated for public motor vehicle use and would be placed in storage. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

### Maintenance Criteria

<b><u>Bmp</u></b>	<b><u>Emp</u></b>	<b><u>Operational Maintenance Level (Current Condition)</u></b>	<b><u>Objective Maintenance Level (Desired Future Condition)</u></b>	<b><u>Alaska Forest Practices Act Class</u></b>
0.00	0.48	2	1	Active during haul, Inactive while stored

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul and firewood removal, road will be stored and maintained in "Inactive" status.

### ATM

STORAGE/FOOT TRAVEL A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

### Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road

<b>Traffic Management Strategies</b>	<b>Encourage:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30
	<b>Accept:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30 Non-motorized use after road is closed year round.
	<b>Discourage:</b>	1 to 5 years after timber sale activities Passenger Vehicle from May 1 to November 30
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

## Travel Management Narrative:

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

Approved /s/ Rachelle Huddleston-Lorton  
District Ranger

June 28, 2013  
Date

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Site Specific Design Criteria  
Road 2030110

Route Basics:

The purpose of this road is to access Unit 595-005. The proposed road reconstruction has an approximate length of 0.48 miles. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 2030100. Deferred maintenance may be needed on the parent road including brushing, ditch cleaning, drainage maintenance and spot rocking..

Road Location:

Road accesses Unit 595-005 and 595-006. Grades are favorable to 11%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP’s 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

Wetlands:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

Erosion Control:

An erosion control plan for reconstruction and maintenance will be developed according to standard project specifications (R10 BMP 14.5 and National Core BMP Road-3). All areas of organic or mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17, 14.11, 14.8 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, and Road-7) Incorporate erosion control and stabilization measures in project plans for stabilizing all human caused soil disturbances. Ensure Best Management Practices can be implemented in reconstruction, operation, and maintenance of the road.

Rock Pits:

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6) Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

Stream Crossings:

This road segment crosses two Class II streams and multiple non-stream drainages. Road-stream crossings, stream characteristics, and fish information was based on the most recent RCS data, along with additional survey information. GIS stream locations do not always match the RCS data. A log culvert, log bridge, or bridge will be installed at fish stream crossings. All structures that do not meet fish passage standards (red pipes) would be removed during road storage.

A) MP 0.12	AHMU Class II	Channel Type HCL	Substrate GR-BR
Max. Width 5m	Max. Depth	Gradient 13-15%	
Structure 40 ft. Bridge	Passage Yes	Timing dates 6/25 to 9/01	
Narrative: This crossing is located in cell F6 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Cutthroat trout presence has been verified. Available upstream habitat is 295m, based on GIS. Currently there is one bank (of the road prism adjacent to stream) that is transporting sediment into the stream channel. Road prism will need to be pulled back and reseeded to meet BMPs. Instream work related to the crossing will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.			



<b>B) MP 0.15</b>	<b>AHMU Class II</b>	<b>Channel Type HCL</b>	<b>Substrate G-BD</b>
<b>Max. Width 10m</b>	<b>Max. Depth</b>	<b>Gradient 7-9%</b>	
<b>Structure 60 ft. Bridge</b>	<b>Passage Yes</b>	<b>Timing dates 6/25 to 9/01</b>	

**Narrative** This crossing is located in cell E6 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Cutthroat trout presence has been verified. Available upstream habitat is 922m, based on GIS. Currently there is one bank (of the road prism adjacent to stream) that is transporting sediment into the stream channel. Road prism will need to be pulled back and reseeded to meet BMPs. Instream work related to the crossing will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

### **Other Resource Information**

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** This road accesses a unit that is part of the unit pool due to the Old Growth Resrve modifications proposed in Alternative 3 only. No concerns.

**Botany:** No concerns

**Invasive Species:** No concerns

**Lands/Minerals/Geology/Karst:** No concerns

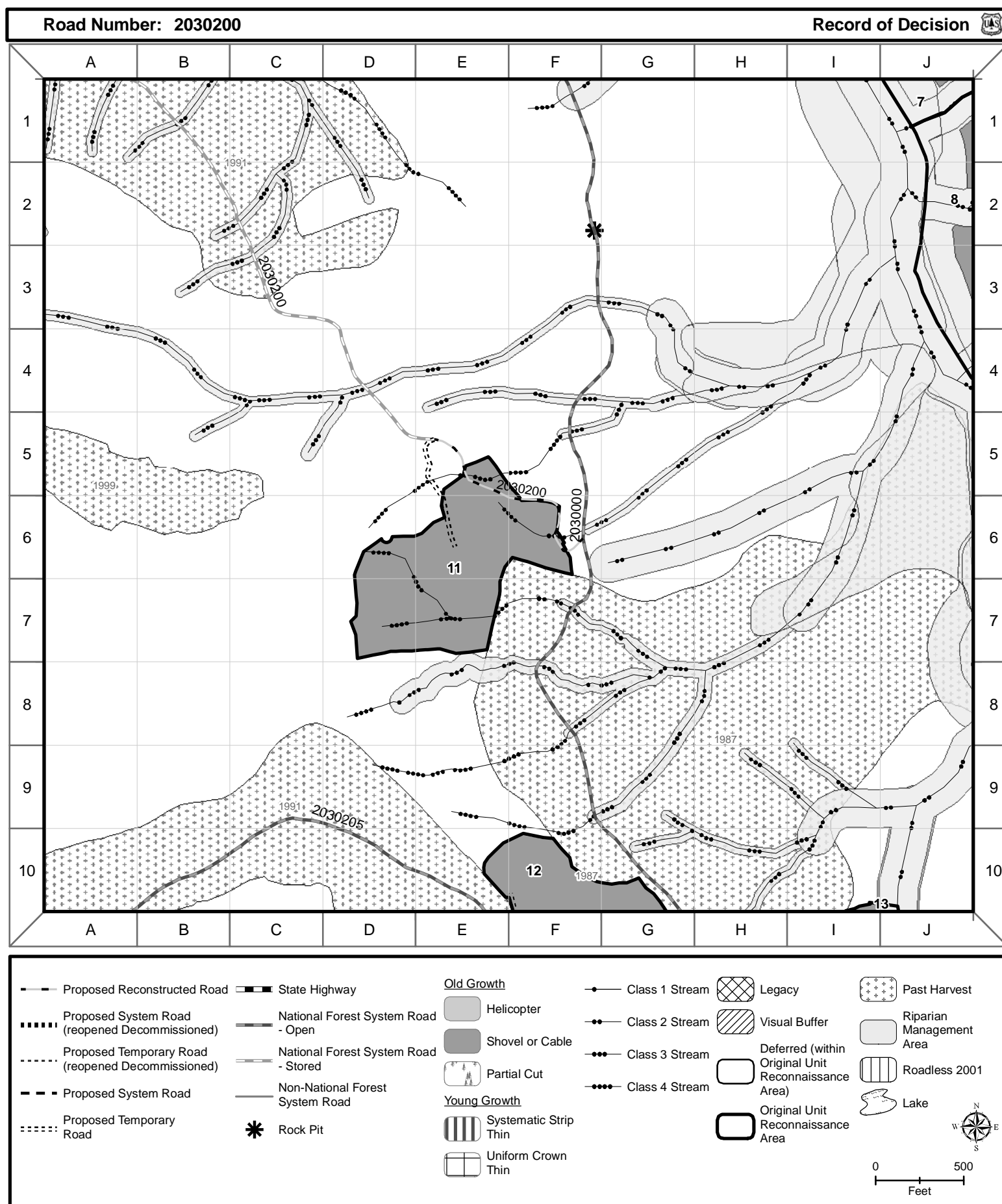
### **Soil and Water:**

Currently there are several areas in which the cut bank along this road that are eroding and transporting sediment into the inboard ditch. The ditch relief culverts in these areas are allowing the water to move downslope and dispersing into forested terrain. These ditches are not flowing into stream courses. One area of the inboard ditch has been blocked by sediment and is eroding the road prism for about 70 feet. Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities plus a period of 1 to 5 years. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** No concerns

**Heritage Resources:** No concerns

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**Project:** Big Thorne EIS      **System:** Prince of Wales Island      **Land Use Designation:** Timber Production

**Route No** 2030200      **Route Name**      **Begin Terminus** 2030000 MP 2.03      **End Terminus** 2030210 MP 0.00

**Begin MP** 0.00      **Length** 0.24      **Status** Existing

## General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

## Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities road would remain open shown on the Motor Vehicle Use Map, to highway legal vehicles, seasonal from May 1 to November 30 for 1 to 5 years to allow for firewood removal and other incidental uses. At the end of the 1 to 5 year period, the road is not designated for public motor vehicle use as a road, and is dual designated as National Forest System Trail and managed as OHV motorized trail. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage with OHV, between periods of operation, closed to highway vehicles.

## Maintenance Criteria

<u>Bmp</u>	<u>Emp</u>	<u>Operational Maintenance Level (Current Condition)</u>	<u>Objective Maintenance Level (Desired Future Condition)</u>	<u>Alaska Forest Practices Act Class</u>
0.00	0.24	2	1	Active during haul, Inactive while stored

## Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul and firewood removal, road will be stored and maintained in "Inactive" status.

## ATM

Other system off highway vehicle (ohv) trail: A road or trail that is closed to all highway legal vehicle traffic, has a vegetative clearing width of approximately 6 feet is maintained and the OHV trail is monitored for resource protection. OHV are vehicles designed or retro-fitted primarily for recreational use off road. This classification includes all-terrain vehicles, mini-bikes, amphibious vehicles, off highway motorcycles, motorized trail bikes, and dune buggies, 50 inches or less in width. During the time it is closed it will be managed as a trail.

## Operation Criteria

**Highway Safety Act:** No

**Jurisdiction:** USFS National Forest Ownership

**Other System** NFST – National Forest System Trail

**Service Life** IS – Intermittent Stored Service

**System** NFSR – National Forest System Road

# Appendix 2

<b>Traffic Management Strategies</b>	<b>Encourage:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30
	<b>Accept:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30 OHV and Non-motorized use after road is closed year round.
	<b>Discourage:</b>	1 to 5 years after timber sale activities Passenger Vehicle from May 1 to November 30
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

**Travel Management Narrative:**

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and highway legal vehicle use will be eliminated. It is open and suitable for OHV and non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

**Approved** /s/ Rachelle Huddleston-Lorton  
District Ranger

June 28, 2013  
Date

### Site Specific Design Criteria Road 2030200

#### **Route Basics:**

The purpose of this road is to access Unit 595-11. The proposed road reconstruction has an approximate length of 0.24 miles. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 2030000. Deferred maintenance may be needed on the parent road including brushing, ditch cleaning, drainage maintenance and spot rocking.

#### **Road Location:**

Road accesses Unit 595-11. Grades are favorable to 18%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

#### **Wetlands:**

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

#### **Erosion Control:**

An erosion control plan for reconstruction and maintenance will be developed according to standard project specifications (R10 BMP 14.5 and National Core BMP Road-3). All areas of organic or mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17, 14.11, 14.8 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, and Road-7). Incorporate erosion control and stabilization measures in project plans for stabilizing all human caused soil disturbances. Ensure Best Management Practices can be implemented in reconstruction, operation, and maintenance of the road.

#### **Rock Pits:**

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6). Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

#### **Stream Crossings:**

No Class I, II or III stream crossings are present along this road segment. Two Class IV stream crossings and occasional non-stream drainages are present along this road segment. Road-stream crossings, stream characteristics, and fish information was based on the most recent RCS data, along with additional survey information. GIS stream locations do not always match the RCS data.

#### **Other Resource Information**

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** No concerns.

**Botany:** No concerns

**Invasive Species:** No concerns

**Lands/Minerals/Geology/Karst:** No concerns

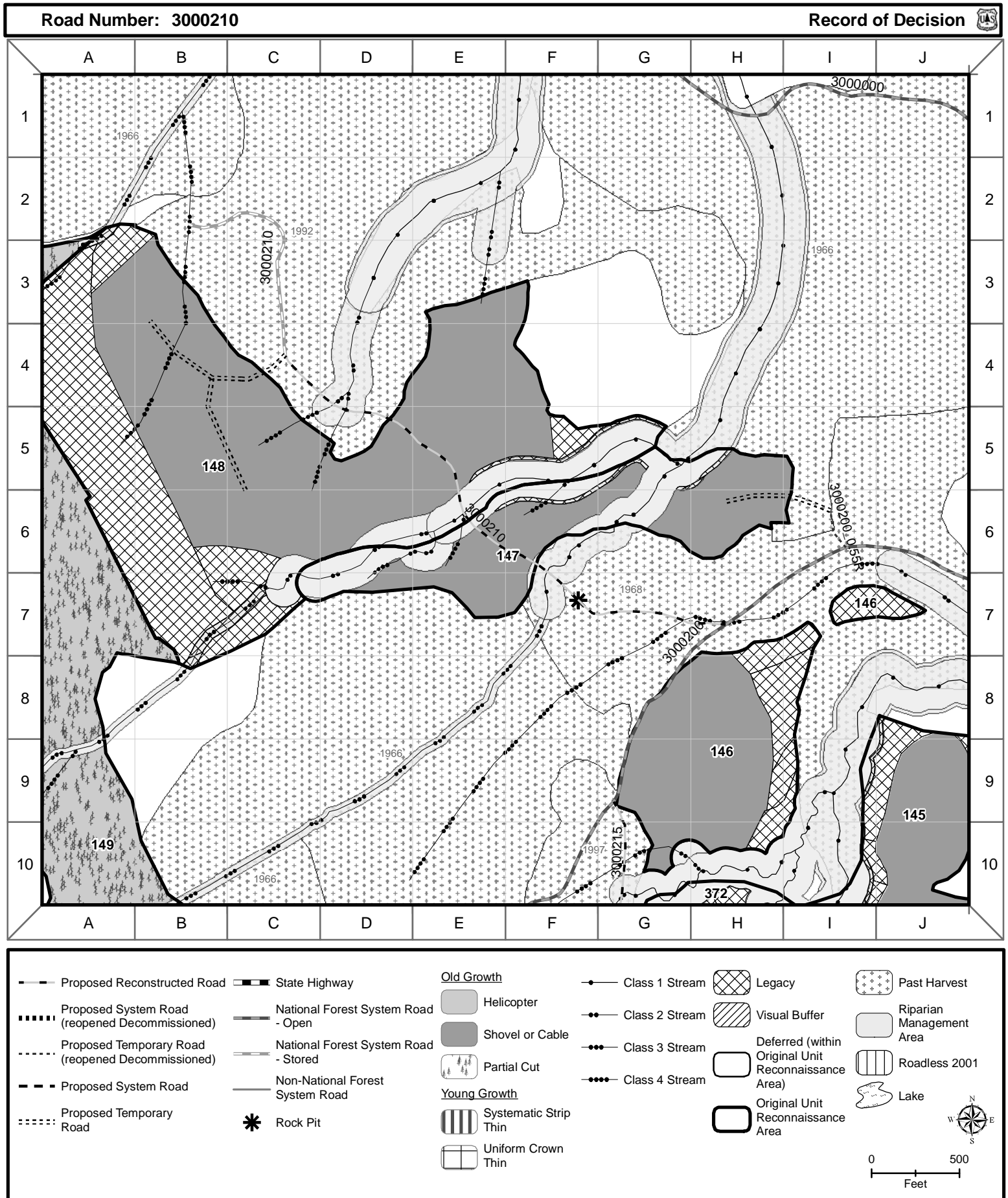
## Appendix 2

### **Soil and Water:**

Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities plus a period of 1 to 5 years. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** No concerns

**Heritage Resources:** No concerns



## Appendix 2

**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Modified Landscape

**Route No**  
3000210

**Route Name**

**Begin Terminus**  
3000200 MP 0.70

**End Terminus**  
Proposed Temp Road

**Begin MP**  
0.00

**Length**  
0.60

**Status**  
Existing

### General Design Criteria and Elements

<b><u>Functional Class</u></b>	<b><u>Service Life</u></b>	<b><u>Surface</u></b>	<b><u>Width</u></b>	<b><u>Design Speed</u></b>	<b><u>Critical Vehicle</u></b>	<b><u>Design Vehicle</u></b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

### Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities road would remain open shown on the Motor Vehicle Use Map, to highway legal vehicles, seasonal from May 1 to November 30 for 1 to 5 years to allow for firewood removal and other incidental uses. At the end of 1 to 5 years road is not designated for public motor vehicle use and would be placed in storage. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

### Maintenance Criteria

<b><u>Bmp</u></b>	<b><u>Emp</u></b>	<b><u>Operational Maintenance Level (Current Condition)</u></b>	<b><u>Objective Maintenance Level (Desired Future Condition)</u></b>	<b><u>Alaska Forest Practices Act Class</u></b>
0.00	0.60	2	1	Active during haul, Inactive while stored

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul and firewood removal, road will be stored and maintained in "Inactive" status.

### ATM

STORAGE/FOOT TRAVEL A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

### Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road



<b>Traffic Management Strategies</b>	<b>Encourage:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30
	<b>Accept:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30 Non-motorized use after road is closed year round.
	<b>Discourage:</b>	1 to 5 years after timber sale activities Passenger Vehicle from May 1 to November 30
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

## Travel Management Narrative:

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

Approved /s/ Rachelle Huddleston-Lorton  
District Ranger

June 28, 2013  
Date

# Appendix 2

## Site Specific Design Criteria Road 3000210

### Route Basics:

The purpose of this road is to access Units 584-147 and 584-148. The proposed road reconstruction has an approximate length of 0.24 mile. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 3000200. Deferred maintenance may be needed on the parent road including brushing, ditch cleaning, drainage maintenance and spot rocking.

### Road Location:

Road accesses Units 584-147 and 584-148 and provides landing locations for Unit 584-149.. Grades are favorable to 14%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

### Wetlands:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

### Erosion Control:

An erosion control plan for reconstruction and maintenance will be developed according to standard project specifications (R10 BMP 14.5 and National Core BMP Road-3). All areas of organic or mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17, 14.11, 14.8 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, and Road-7) Incorporate erosion control and stabilization measures in project plans for stabilizing all human caused soil disturbances. Ensure Best Management Practices can be implemented in reconstruction, operation, and maintenance of the road.

### Rock Pits:

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6) Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

### Stream Crossings:

This road segment crosses two Class I streams, three Class II streams, two Class IV streams and multiple non-stream drainages. An existing stream crossing structure is already in place at one of the three Class II stream crossings and the others have been removed during past road storage (listed below). The existing structure is located at mile post 0.53 (cell D4) and has 7m of available upstream habitat, based on GIS. Road-stream crossings, stream characteristics, and fish information was based on the most recent RCS data, along with additional survey information. GIS stream locations do not always match the RCS data. A log culvert, log bridge, or bridge will be installed at fish stream crossings. All structures that do not meet fish passage standards (red pipes) would be removed during road storage.

A) MP 0.01	AHMU Class II-NS	Channel Type HCL-NS	Substrate
Max. Width.	Max. Depth	Gradient	
Structure CMP	Passage No	Timing dates N/A	
<b>Narrative:</b> This crossing is located in cell H7 on the road card map. Dolly Varden char presence has been verified downstream of the road-stream crossing. The stream concludes at the road; available upstream habitat is 0.0m, based on RCS. A fish passage structure, therefore, is not required at this crossing.			

<b>B) MP 0.04</b>	<b>AHMU Class II</b>	<b>Channel Type HCL</b>	<b>Substrate</b>
<b>Max. Width</b>	<b>Max. Depth</b>	<b>Gradient</b>	
<b>Structure</b> Log Culvert/Bridge	<b>Passage</b> Yes	<b>Timing dates</b> 6/15 to 9/01	

**Narrative:** This crossing is located in cell G7 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Dolly Varden char presence has been verified. Available upstream habitat is 669m, based on GIS. Instream work related to the crossing, if any, will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

<b>C) MP 0.22</b>	<b>AHMU Class I</b>	<b>Channel Type HCO</b>	<b>Substrate SA</b>
<b>Max. Width</b> 0.4m	<b>Max. Depth</b>	<b>Gradient</b> 6%	
<b>Structure</b> Log Culvert	<b>Passage</b> Yes	<b>Timing dates</b> Needed	

**Narrative** This crossing is located in cell F7 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Available upstream habitat is 52m, based on GIS. An additional survey will be conducted prior to implementation to determine fish presence and timing restrictions. Instream work related to the crossing, if any, will be carried out under current timing and concurrence from the State will be solicited prior to starting the work.

<b>D) MP 0.32</b>	<b>AHMU Class I</b>	<b>Channel Type HCL</b>	<b>Substrate GR-CO</b>
<b>Max. Width</b> 4m	<b>Max. Depth</b>	<b>Gradient</b> 10%	
<b>Structure</b> Bridge	<b>Passage</b> Yes	<b>Timing dates</b> 6/25 to 8/03	

**Narrative:** This crossing is located in cell E6 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Chum salmon and cutthroat trout presence has been verified. Available upstream habitat is 362m, based on GIS. Instream work related to the crossing, if any, will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

### **Other Resource Information**

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** No concerns.

**Botany:** No concerns

**Invasive Species:** No concerns

**Lands/Minerals/Geology/Karst:** No concerns

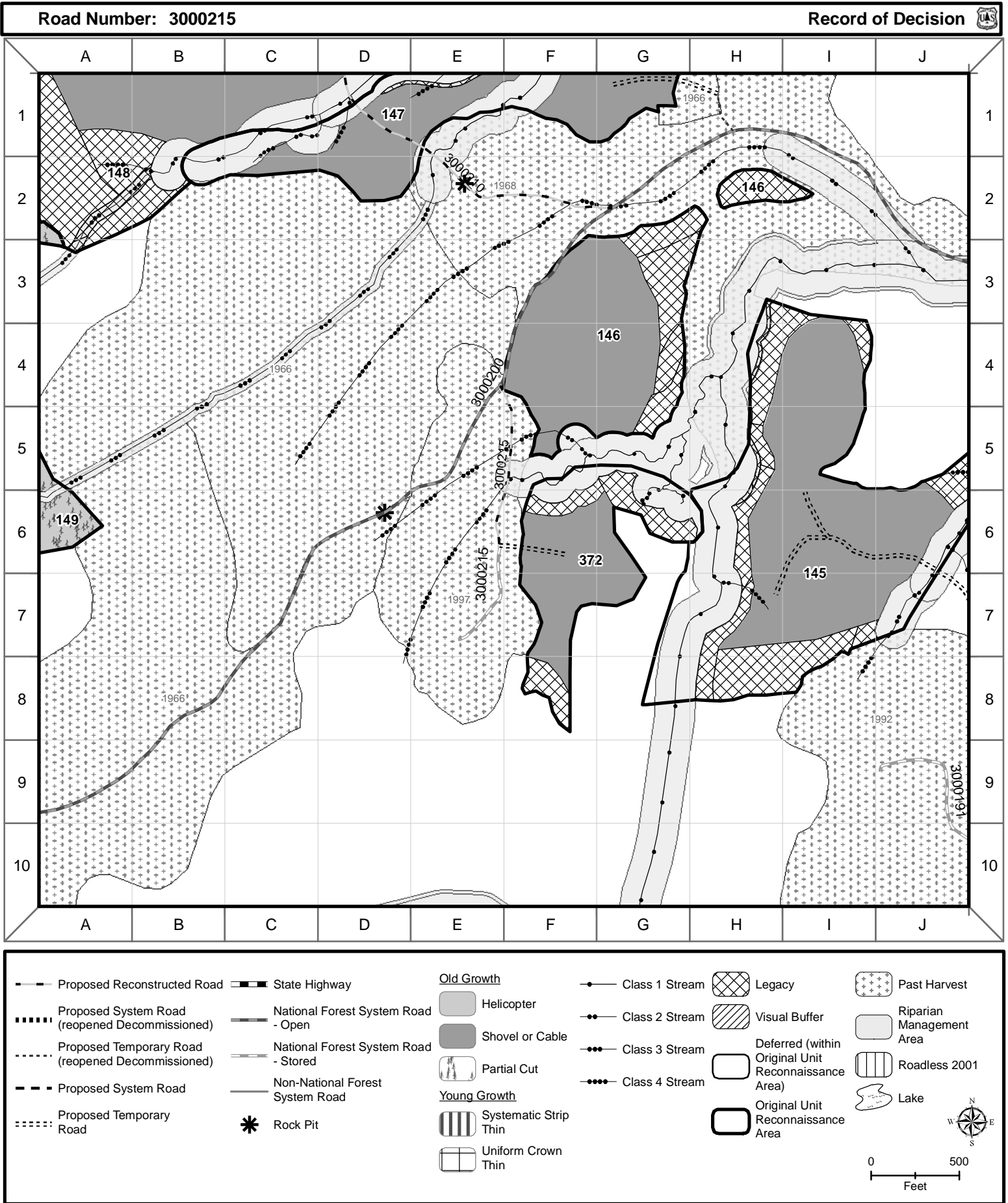
### **Soil and Water:**

Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities plus a period of 1 to 5 years. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** No concerns

**Heritage Resources:** No concerns

Appendix 2



**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Modified Landscape

**Route No**  
3000215

**Route Name**

**Begin Terminus**  
3000200 MP 0.93

**End Terminus**  
Proposed Temp Road

**Begin MP**  
0.00

**Length**  
0.23

**Status**  
Existing

### General Design Criteria and Elements

<b><u>Functional</u></b>	<b><u>Service</u></b>		<b><u>Design</u></b>			
<b><u>Class</u></b>	<b><u>Life</u></b>	<b><u>Surface</u></b>	<b><u>Width</u></b>	<b><u>Speed</u></b>	<b><u>Critical Vehicle</u></b>	<b><u>Design Vehicle</u></b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

### Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities road would remain open shown on the Motor Vehicle Use Map, to highway legal vehicles, seasonal from May 1 to November 30 for 1 to 5 years to allow for firewood removal and other incidental uses. At the end of 1 to 5 years road is not designated for public motor vehicle use and would be placed in storage. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

### Maintenance Criteria

<b><u>Bmp</u></b>	<b><u>Emp</u></b>	<b><u>Operational Maintenance Level (Current Condition)</u></b>	<b><u>Objective Maintenance Level (Desired Future Condition)</u></b>	<b><u>Alaska Forest Practices Act Class</u></b>
0.00	0.23	2	1	Active during haul, Inactive while stored

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul and firewood removal, road will be stored and maintained in "Inactive" status.

### ATM

STORAGE/FOOT TRAVEL A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

### Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road

# Appendix 2

<b>Traffic Management Strategies</b>	<b>Encourage:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30
	<b>Accept:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30 Non-motorized use after road is closed year round.
	<b>Discourage:</b>	1 to 5 years after timber sale activities Passenger Vehicle from May 1 to November 30
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

**Travel Management Narrative:**

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

**Approved** /s/ Rachelle Huddleston-Lorton  
District Ranger

June 28, 2013  
Date

### Site Specific Design Criteria Road 3000215

#### **Route Basics:**

The purpose of this road is to access Unit 584-372. The proposed road reconstruction has an approximate length of 0.23 mile. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 3000200. Deferred maintenance may be needed on the parent road including brushing, ditch cleaning, drainage maintenance and spot rocking.

#### **Road Location:**

Road accesses Unit 584-372. Grades are favorable to 12%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

#### **Wetlands:**

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

#### **Erosion Control:**

An erosion control plan for reconstruction and maintenance will be developed according to standard project specifications (R10 BMP 14.5 and National Core BMP Road-3). All areas of organic or mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17, 14.11, 14.8 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, and Road-7). Incorporate erosion control and stabilization measures in project plans for stabilizing all human caused soil disturbances. Ensure Best Management Practices can be implemented in construction, operation, and maintenance of the road.

#### **Rock Pits:**

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6). Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

#### **Stream Crossings:**

No Class I, II or III stream crossings are present along this road segment. Two Class IV stream crossings and occasional non-stream drainages are present along this road segment. Road-stream crossings, stream characteristics, and fish information was based on the most recent RCS data, along with additional survey information. GIS stream locations do not always match the RCS data.

#### **Other Resource Information**

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** No concerns.

**Botany:** No concerns

**Invasive Species:** No concerns

**Lands/Minerals/Geology/Karst:** No concerns

## Appendix 2

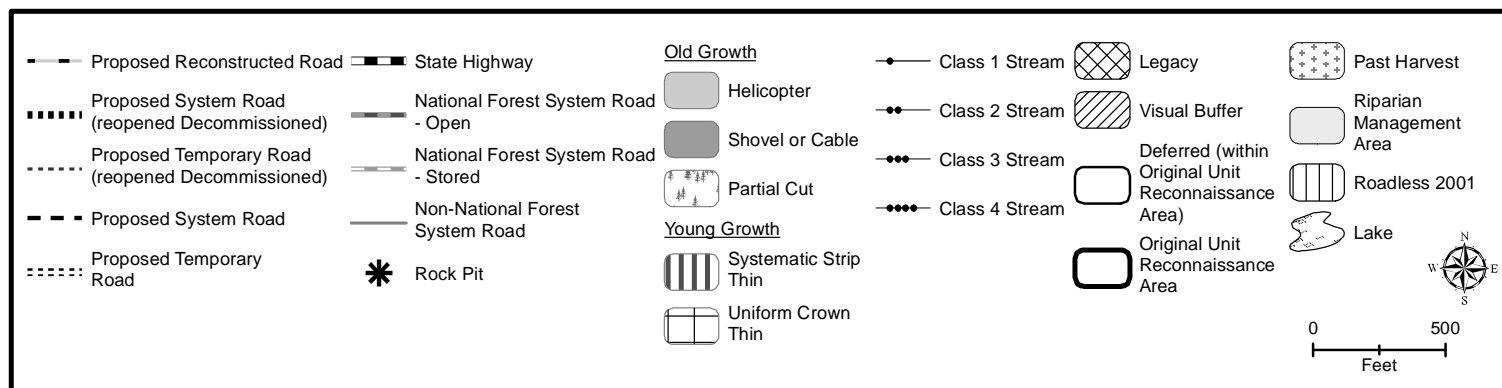
### **Soil and Water:**

Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities plus a period of 1 to 5 years. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** No concerns

**Heritage Resources:** No concerns





## Appendix 2

**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Old-Growth Habitat  
Modified Landscape

**Route No**  
3000301

**Route Name**

**Begin Terminus**  
3000000 MP 36.50

**End Terminus**  
3000301 MP 0.55

**Begin MP**  
0.00

**Length**  
0.55

**Status**  
Existing

### General Design Criteria and Elements

<b><u>Functional</u></b>	<b><u>Service</u></b>		<b><u>Design</u></b>			
<b><u>Class</u></b>	<b><u>Life</u></b>	<b><u>Surface</u></b>	<b><u>Width</u></b>	<b><u>Speed</u></b>	<b><u>Critical Vehicle</u></b>	<b><u>Design Vehicle</u></b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

### Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities are completed, the road would be placed in storage and would not be designated for public motor vehicle use. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

### Maintenance Criteria

<b><u>Bmp</u></b>	<b><u>Emp</u></b>	<b><u>Operational Maintenance Level (Current Condition)</u></b>	<b><u>Objective Maintenance Level (Desired Future Condition)</u></b>	<b><u>Alaska Forest Practices Act Class</u></b>
0.00	0.55	2	1	Active during haul, Inactive while stored

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul road will be stored and maintained in "Inactive" status.

### ATM

STORAGE/FOOT TRAVEL A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

### Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road

<b>Traffic Management Strategies</b>	<b>Encourage:</b>	N/A
	<b>Accept:</b>	Non-motorized use after road is closed year round.
	<b>Discourage:</b>	N/A
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

## Travel Management Narrative:

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

Approved /s/ Rachelle Huddleston-Lorton  
District Ranger

June 28, 2013  
Date

# Appendix 2

## Site Specific Design Criteria Road 3000301

### **Route Basics:**

The purpose of this road is to access Units 583-172 and 583-559. The proposed road reconstruction has an approximate length of 0.55 mile. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 3000000.

### **Road Location:**

Road accesses Units 172 and 583-559. Grades are favorable to 12%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

### **Wetlands:**

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

### **Erosion Control:**

An erosion control plan for reconstruction and maintenance will be developed according to standard project specifications (R10 BMP 14.5 and National Core BMP Road-3). All areas of organic or mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17, 14.11, 14.8 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, and Road-7). Incorporate erosion control and stabilization measures in project plans for stabilizing all human caused soil disturbances. Ensure Best Management Practices can be implemented in construction, operation, and maintenance of the road.

### **Rock Pits:**

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6). Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

### **Stream Crossings:**

One Class II stream crossing is present at mile post 0.14 (cell F5) and an existing stream crossing structure is already in place. The stream has 54m of available upstream habitat. Multiple non-stream drainages are present along this road segment. Road-stream crossings, stream characteristics, and fish information was based on the most recent RCS data, along with additional survey information. GIS stream locations do not always match the RCS data. All structures that do not meet fish passage standards (red pipes) would be removed during road storage. If necessary, an additional survey would be conducted during storage to determine fish presence and timing restrictions. Instream work related to the crossing, if any, would be carried out under current timing restrictions and concurrence from the State would be solicited prior to starting the work.

## **Other Resource Information**

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** Entire reconstructed road length is in a small OGR. Road is in an area that provides east-west connectivity to the shoreline near Ratz Harbor. Minimize disturbance adjacent to road. Recommend road storage immediately after harvest is completed. This road is recommended for early closure for wildlife concerns; however there is also a proposed commercial thinning unit that is accessed by this road. Closure may have to be postponed until after thinning is completed.

**Botany:** No concerns

**Invasive Species:** No concerns

**Lands/Minerals/Geology/Karst:** No concerns

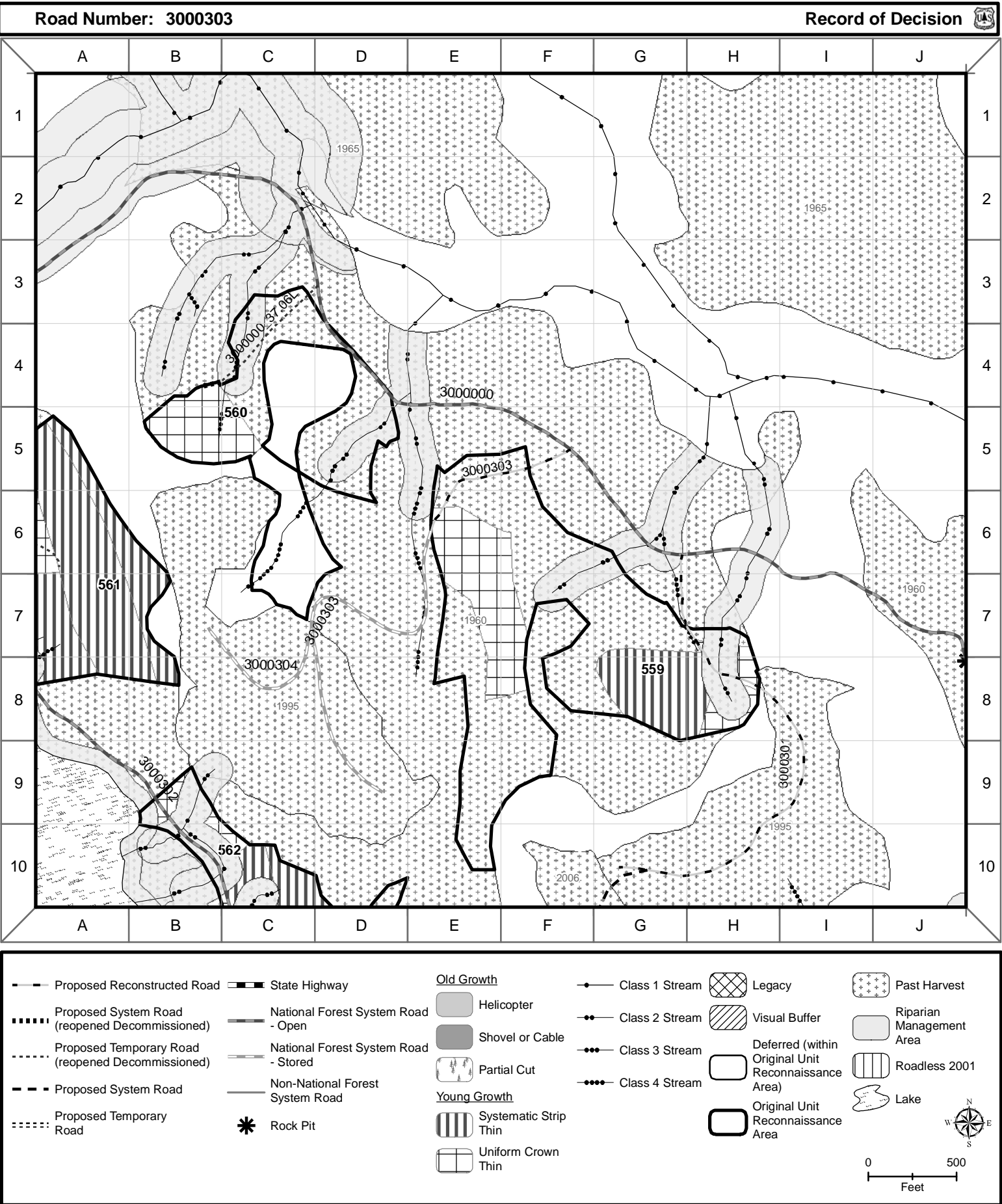
**Soil and Water:**

There are a couple of areas along this road segment in which water from non-streams is collecting in blocked inboard ditches or flowing down the road causing the road prism to erode. Inboard ditches need to be cleared and established and structures installed so as not to impede natural flows. Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** No concerns

**Heritage Resources:** No concerns

## Appendix 2



**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Old-Growth Habitat

**Route No**  
3000303

**Route Name**

**Begin Terminus**  
3000000 MP 36.67

**End Terminus**  
Unit 583-559

**Begin MP**  
0.00

**Length**  
0.19

**Status**  
Existing

## General Design Criteria and Elements

<b><u>Functional</u></b>	<b><u>Service</u></b>		<b><u>Design</u></b>			
<b><u>Class</u></b>	<b><u>Life</u></b>	<b><u>Surface</u></b>	<b><u>Width</u></b>	<b><u>Speed</u></b>	<b><u>Critical Vehicle</u></b>	<b><u>Design Vehicle</u></b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

## Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities are completed, the road would be placed in storage and would not be designated for public motor vehicle use. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

## Maintenance Criteria

<b><u>Bmp</u></b>	<b><u>Emp</u></b>	<b><u>Operational Maintenance Level (Current Condition)</u></b>	<b><u>Objective Maintenance Level (Desired Future Condition)</u></b>	<b><u>Alaska Forest Practices Act Class</u></b>
0.00	0.19	2	1	Active during haul, Inactive while stored

## Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul road will be stored and maintained in "Inactive" status.

## ATM

**STORAGE/FOOT TRAVEL** A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

## Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road

# Appendix 2

<b>Traffic Management Strategies</b>	<b>Encourage:</b>	N/A
	<b>Accept:</b>	Non-motorized use after road is closed year round.
	<b>Discourage:</b>	N/A
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

**Travel Management Narrative:**

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

**Approved**           /s/ Rachelle Huddleston-Lorton            
District Ranger

          June 28, 2013            
Date



## Site Specific Design Criteria Road 3000303

### **Route Basics:**

The purpose of this road is to access Unit 583-559. The proposed road reconstruction has an approximate length of 0.19 mile. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 3000000.

### **Road Location:**

Road accesses Unit 583-559. Grades are favorable to 15%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

### **Wetlands:**

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

### **Erosion Control:**

An erosion control plan for reconstruction and maintenance will be developed according to standard project specifications (R10 BMP 14.5 and National Core BMP Road-3). All areas of organic or mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17, 14.11, 14.8 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, and Road-7). Incorporate erosion control and stabilization measures in project plans for stabilizing all human caused soil disturbances. Ensure Best Management Practices can be implemented in construction, operation, and maintenance of the road.

### **Rock Pits:**

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6). Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

### **Stream Crossings:**

No Class I, II, III or IV stream crossings are present along this road segment. Multiple non-stream drainages are present along this road segment. Road-stream crossings, stream characteristics, and fish information is based on the most recent RCS data, along with additional survey information. GIS stream locations do not always match the RCS data.

## **Other Resource Information**

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** Entire reconstructed road length is inside a small OGR. Minimize disturbance adjacent to road. Recommend road storage immediately after harvest is completed. This road accesses a proposed commercial thinning unit. Closure may have to be postponed until after thinning is completed.

**Botany:** No concerns

**Invasive Species:** No concerns

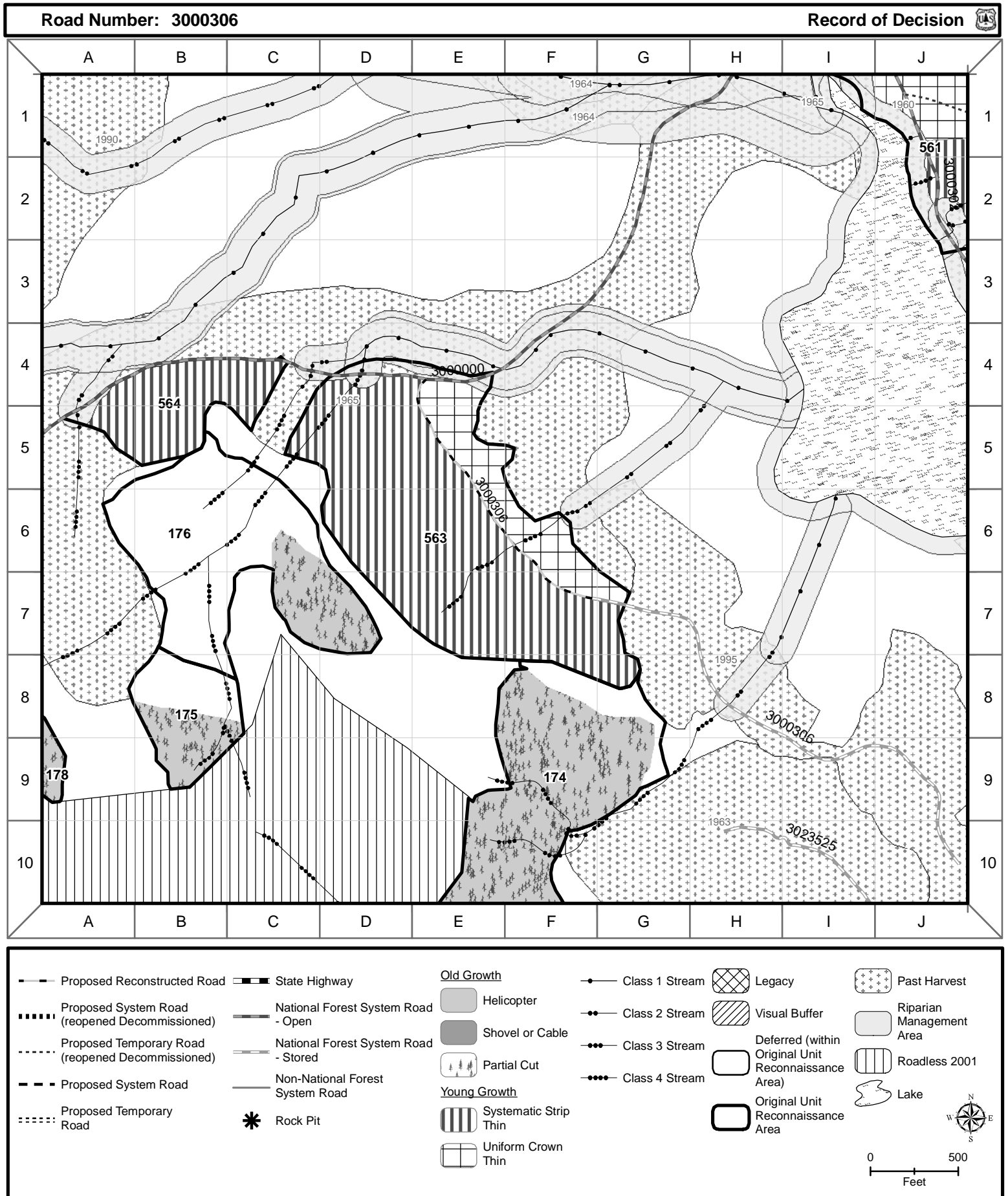
**Lands/Minerals/Geology/Karst:** No concerns

## Appendix 2

**Soil and Water:** Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** No concerns

**Heritage Resources:** No concerns



## Appendix 2

**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Modified Landscape

**Route No**  
3000306

**Route Name**

**Begin Terminus**  
3000000 MP 38.35

**End Terminus**  
Unit 583-563

**Begin MP**  
0.00

**Length**  
0.32

**Status**  
Existing

### General Design Criteria and Elements

<b><u>Functional</u></b>	<b><u>Service</u></b>			<b><u>Design</u></b>		
<b><u>Class</u></b>	<b><u>Life</u></b>	<b><u>Surface</u></b>	<b><u>Width</u></b>	<b><u>Speed</u></b>	<b><u>Critical Vehicle</u></b>	<b><u>Design Vehicle</u></b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

### Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities road would remain open shown on the Motor Vehicle Use Map, to highway legal vehicles, seasonal from May 1 to November 30 for 1 to 5 years to allow for firewood removal and other incidental uses. At the end of 1 to 5 years road is not designated for public motor vehicle use and would be placed in storage. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

### Maintenance Criteria

<b><u>Bmp</u></b>	<b><u>Emp</u></b>	<b><u>Operational Maintenance Level (Current Condition)</u></b>	<b><u>Objective Maintenance Level (Desired Future Condition)</u></b>	<b><u>Alaska Forest Practices Act Class</u></b>
0.00	0.32	2	1	Active during haul, Inactive while stored

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul and firewood removal, road will be stored and maintained in "Inactive" status.

### ATM

STORAGE/FOOT TRAVEL A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

### Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road

<b>Traffic Management Strategies</b>	<b>Encourage:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30
	<b>Accept:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30 Non-motorized use after road is closed year round.
	<b>Discourage:</b>	1 to 5 years after timber sale activities Passenger Vehicle from May 1 to November 30
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

## Travel Management Narrative:

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

Approved /s/ Rachelle Huddleston-Lorton  
District Ranger

June 28, 2013  
Date

# Appendix 2

## Site Specific Design Criteria Road 3000306

### **Route Basics:**

The purpose of this road is to access Unit 583-563. The proposed road reconstruction has an approximate length of 0.32 mile. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 3000000.

### **Road Location:**

Road accesses Unit 583-563 and provides landing locations for Units 583-174, 583-175 and 583-176. Grades are favorable to 15%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

### **Wetlands:**

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

### **Erosion Control:**

An erosion control plan for reconstruction and maintenance will be developed according to standard project specifications (R10 BMP 14.5 and National Core BMP Road-3). All areas of organic or mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17, 14.11, 14.8 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, and Road-7) Incorporate erosion control and stabilization measures in project plans for stabilizing all human caused soil disturbances. Ensure Best Management Practices can be implemented in construction, operation, and maintenance of the road.

### **Rock Pits:**

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6) Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

### **Stream Crossings:**

No Class I, II, or III stream crossings are present along this road segment. One Class IV and multiple non-stream drainages are present along this road segment. During the different road and unit surveys no erosional features were identified along this road segment that could transport sediment into the Class II stream or the Class I stream adjacent to the 3000000 road. Road-stream crossings, stream characteristics, and fish information is based on the most recent RCS data, along with additional survey information. GIS stream locations do not always match the RCS data.

## **Other Resource Information**

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** No concerns

**Botany:** No concerns

**Invasive Species:** No concerns

**Lands/Minerals/Geology/Karst:** No concerns

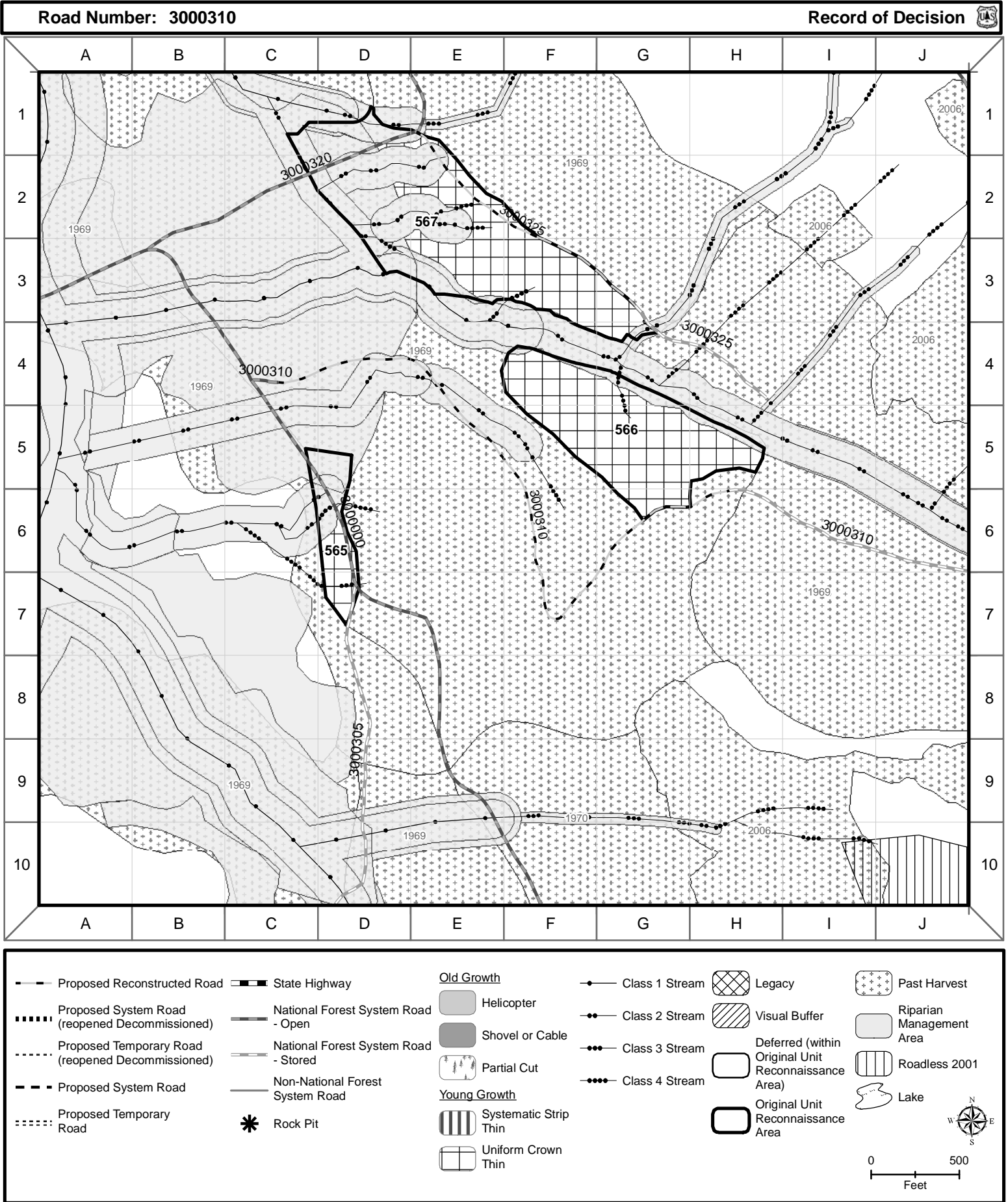
**Soil and Water:**

Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities plus a period of 1 to 5 years. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** No concerns

**Heritage Resources:** No concerns

Appendix 2





**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Modified Landscape

**Route No**  
3000310

**Route Name**

**Begin Terminus**  
3000000 MP 44.87

**End Terminus**  
Unit 581-566

**Begin MP**  
0.03

**Length**  
0.73

**Status**  
Existing

### General Design Criteria and Elements

<b><u>Functional</u></b>	<b><u>Service</u></b>			<b><u>Design</u></b>		
<b><u>Class</u></b>	<b><u>Life</u></b>	<b><u>Surface</u></b>	<b><u>Width</u></b>	<b><u>Speed</u></b>	<b><u>Critical Vehicle</u></b>	<b><u>Design Vehicle</u></b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

### Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities road would remain open shown on the Motor Vehicle Use Map, to highway legal vehicles, seasonal from May 1 to November 30 for 1 to 5 years to allow for firewood removal and other incidental uses. At the end of 1 to 5 years road is not designated for public motor vehicle use and would be placed in storage. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

### Maintenance Criteria

<b><u>Bmp</u></b>	<b><u>Emp</u></b>	<b><u>Operational Maintenance Level (Current Condition)</u></b>	<b><u>Objective Maintenance Level (Desired Future Condition)</u></b>	<b><u>Alaska Forest Practices Act Class</u></b>
0.03	0.76	2	1	Active during haul, Inactive while stored

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul and firewood removal, road will be stored and maintained in "Inactive" status.

### ATM

STORAGE/FOOT TRAVEL A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

### Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road

# Appendix 2

<b>Traffic Management Strategies</b>	<b>Encourage:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30
	<b>Accept:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30 Non-motorized use after road is closed year round.
	<b>Discourage:</b>	1 to 5 years after timber sale activities Passenger Vehicle from May 1 to November 30
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

**Travel Management Narrative:**

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

Approved /s/ Rachelle Huddleston-Lorton  
District Ranger

June 28, 2013  
Date

### Site Specific Design Criteria Road 3000310

#### Route Basics:

The purpose of this road is to access Unit 581-566. The proposed road reconstruction has an approximate length of 0.73 mile. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 3000000.

#### Road Location:

Road accesses Units 581-566. Grades are favorable to 14%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

#### Wetlands:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

#### Erosion Control:

An erosion control plan for reconstruction and maintenance will be developed according to standard project specifications (R10 BMP 14.5 and National Core BMP Road-3). All areas of organic or mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17, 14.11, 14.8 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, and Road-7). Incorporate erosion control and stabilization measures in project plans for stabilizing all human caused soil disturbances. Ensure Best Management Practices can be implemented in construction, operation, and maintenance of the road.

#### Rock Pits:

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6). Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

About 0.2 mile of the road is underlain by a bedrock type which contains varying amounts of pyrite and other sulfides. Within the Coffman Cove Road project, similar bedrock that was heavily mineralized was used in the road's subgrade resulted in the generation of "acid rock drainage" (ARD), which negatively impacted water quality and aquatic environments downstream of the construction. Existing Forest roads and quarries in this area are constructed from and on this or similar bedrock types. The level of mineralization of the material used for construction of existing roads is not known; however, no past problems have been observed. Any existing material source or newly developed source within similar bedrock types that may be used to construct access to the proposed harvest areas, shall be assessed as to its ARD potential.

#### Stream Crossings:

One Class II stream crossing is present at mile post 0.22 (cell E4) and an existing stream crossing structure is already in place. The stream has 184m of available upstream habitat, based on GIS. Approximately 275 meters of the existing road prism was built in the riparian area of this Class II stream. Multiple non-stream drainages are present along this road segment. Road-stream crossings, stream characteristics, and fish information is based on the most recent RCS data, along with additional survey information. During the different road and unit surveys no erosional features were identified along this road segment that could transport sediment into the Class II stream. GIS stream locations do not always match the RCS data. All structures that do not meet fish passage standards (red pipes) would be removed during road storage. If necessary, an additional survey would be conducted during storage to determine fish presence and timing restrictions. Instream work related to the crossing, if any, would be carried out under current timing restrictions and concurrence from the State would be solicited prior to starting the work.

# Appendix 2

## **Other Resource Information**

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** No concerns

**Botany:** No concerns

**Invasive Species:** No concerns

**Lands/Minerals/Geology/Karst:** No concerns

### **Soil and Water:**

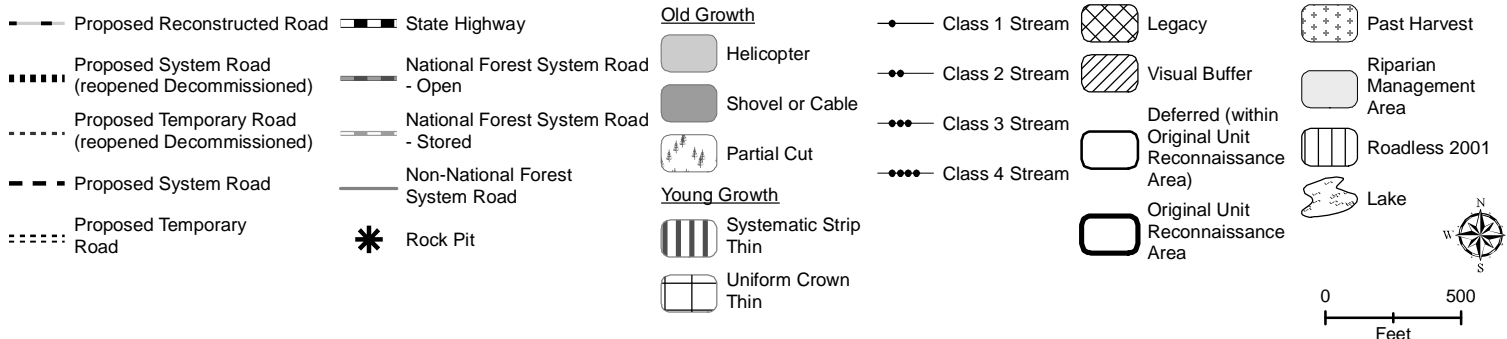
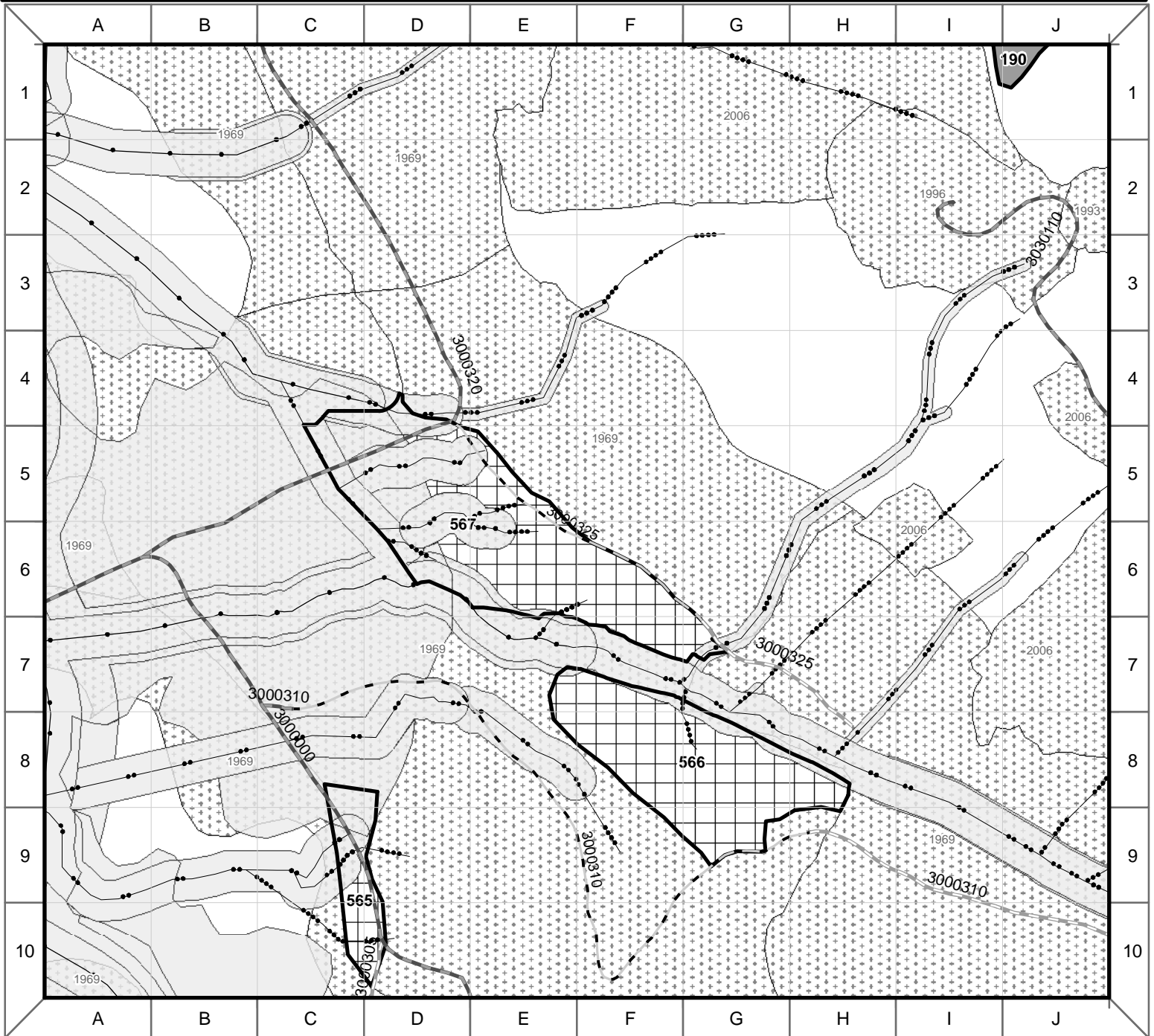
Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities plus a period of 1 to 5 years. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** No concerns

**Heritage Resources:** No concerns

Road Number: 3000325

Record of Decision



## Appendix 2

**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Modified Landscape

**Route No**  
3000325

**Route Name**

**Begin Terminus**  
3000320 MP 0.34

**End Terminus**  
Unit 581-567

**Begin MP**  
0.00

**Length**  
0.31

**Status**  
Existing

### General Design Criteria and Elements

<b><u>Functional Class</u></b>	<b><u>Service Life</u></b>	<b><u>Surface</u></b>	<b><u>Width</u></b>	<b><u>Design Speed</u></b>	<b><u>Critical Vehicle</u></b>	<b><u>Design Vehicle</u></b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

### Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities road would remain open shown on the Motor Vehicle Use Map, to highway legal vehicles, seasonal from May 1 to November 30 for 1 to 5 years to allow for firewood removal and other incidental uses. At the end of 1 to 5 years road is not designated for public motor vehicle use and would be placed in storage. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

### Maintenance Criteria

<b><u>Bmp</u></b>	<b><u>Emp</u></b>	<b><u>Operational Maintenance Level (Current Condition)</u></b>	<b><u>Objective Maintenance Level (Desired Future Condition)</u></b>	<b><u>Alaska Forest Practices Act Class</u></b>
0.00	0.31	2	1	Active during haul, Inactive while stored

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul and firewood removal, road will be stored and maintained in "Inactive" status.

### ATM

STORAGE/FOOT TRAVEL A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

### Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road

<b>Traffic Management Strategies</b>	<b>Encourage:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30
	<b>Accept:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30 Non-motorized use after road is closed year round.
	<b>Discourage:</b>	1 to 5 years after timber sale activities Passenger Vehicle from May 1 to November 30
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

## Travel Management Narrative:

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

Approved /s/ Rachelle Huddleston-Lorton  
District Ranger

June 28, 2013  
Date

# Appendix 2

## Site Specific Design Criteria Road 3000325

### Route Basics:

The purpose of this road is to access Unit 581-567. The proposed road reconstruction has an approximate length of 0.31 mile. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 3000320.

### Road Location:

Road accesses Unit 581-567. Grades are adverse to 14%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

### Wetlands:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

### Erosion Control:

An erosion control plan for reconstruction and maintenance will be developed according to standard project specifications (R10 BMP 14.5 and National Core BMP Road-3). All areas of organic or mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17, 14.11, 14.8 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, and Road-7). Incorporate erosion control and stabilization measures in project plans for stabilizing all human caused soil disturbances. Ensure Best Management Practices can be implemented in construction, operation, and maintenance of the road.

### Rock Pits:

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6). Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

The entire road is believed to be underlain by a bedrock type which contains varying amounts of pyrite and other sulfides. Within the Coffman Cove Road project, similar bedrock that was heavily mineralized was used in the road's subgrade resulted in the generation of "acid rock drainage" (ARD), which negatively impacted water quality and aquatic environments downstream of the construction. Existing Forest roads and quarries in this area are constructed from and on this or similar bedrock types. The level of mineralization of the material used for construction of existing roads is not known; however, no past problems have been observed. Any existing material source or newly developed source within similar bedrock types that may be used to construct access to the proposed harvest areas, shall be assessed as to its ARD potential.

### Stream Crossings:

No Class I, II, III or IV stream crossings are present along this road segment. Multiple non-stream drainages are present along this road segment. Road-stream crossings, stream characteristics, and fish information is based on the most recent RCS data, along with additional survey information. GIS stream locations do not always match the RCS data.

### Other Resource Information

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** No concerns

**Botany:** No concerns



**Invasive Species:** No concerns

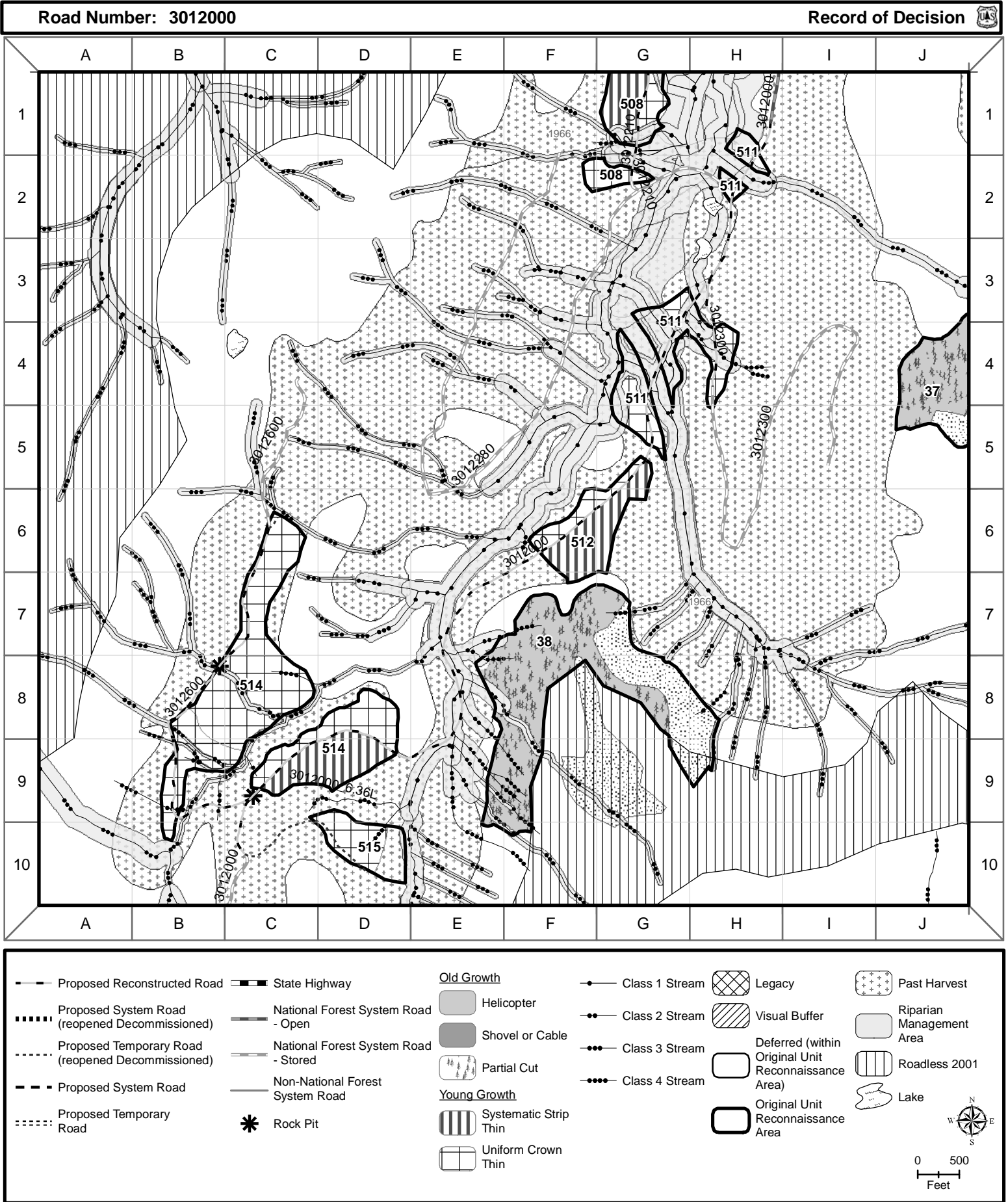
**Lands/Minerals/Geology/Karst:** No concerns

**Soil and Water:** Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities plus a period of 1 to 5 years. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** No concerns

**Heritage Resources:** No concerns

Appendix 2



**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Timber Production

**Route No**  
3012000

**Route Name**

**Begin Terminus**  
3012000 MP 3.92

**End Terminus**  
Proposed Temporary Road

**Begin MP**  
3.92

**Length**  
2.39

**Status**  
Existing

## General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

## Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities road would remain open shown on the Motor Vehicle Use Map, to highway legal vehicles, seasonal from May 1 to November 30 for 1 to 5 years to allow for firewood removal and other incidental uses. At the end of 1 to 5 years, road is not designated for public motor vehicle use and would be placed in storage. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

## Maintenance Criteria

<u>Bmp</u>	<u>Emp</u>	<u>Operational Maintenance Level (Current Condition)</u>	<u>Objective Maintenance Level (Desired Future Condition)</u>	<u>Alaska Forest Practices Act Class</u>
3.92	6.31	2	1	Active during haul, Inactive while stored

## Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul and firewood removal, road will be stored and maintained in "Inactive" status.

## ATM

**STORAGE/FOOT TRAVEL** A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

## Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road

# Appendix 2

<b>Traffic Management Strategies</b>	<b>Encourage:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30
	<b>Accept:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30 Non-motorized use after road is closed year round.
	<b>Discourage:</b>	1 to 5 years after timber sale activities Passenger Vehicle from May 1 to November 30
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

**Travel Management Narrative:**

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

Approved /s/ Rachelle Huddleston-Lorton  
District Ranger

June 28, 2013  
Date

## Site Specific Design Criteria Road 3012000

### Route Basics:

The purpose of this road is to access Units 597.2-511, 597.2-512, 597.2-514, and 597.2-515, and provide helicopter landings for Unit 597.2-038. The proposed road reconstruction has an approximate length of 2.39 miles. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 3012000.

### Road Location:

Road accesses Units 597.2-511, 597.2-512, 597.2-514, and 597.2-515, and provides helicopter landings for Unit 597.2-038. Grades are favorable to 16%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

### Wetlands:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

### Erosion Control:

An erosion control plan for reconstruction and maintenance will be developed according to standard project specifications (R10 BMP 14.5 and National Core BMP Road-3). All areas of organic or mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17, 14.11, 14.8 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, and Road-7). Incorporate erosion control and stabilization measures in project plans for stabilizing all human caused soil disturbances. Ensure Best Management Practices can be implemented in construction, operation, and maintenance of the road.

### Rock Pits:

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6). Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

The entire road is believed to be underlain by a bedrock type which contains varying amounts of pyrite and other sulfides. Within the Coffman Cove Road project, similar bedrock that was heavily mineralized was used in the road's subgrade resulted in the generation of "acid rock drainage" (ARD), which negatively impacted water quality and aquatic environments downstream of the construction. Existing Forest roads and quarries in this area are constructed from and on this or similar bedrock types. The level of mineralization of the material used for construction of existing roads is not known; however, no past problems have been observed. Any existing material source or newly developed source within similar bedrock types that may be used to construct access to the proposed harvest areas, shall be assessed as to its ARD potential.

### Stream Crossings:

Eight Class I streams, one Class IV stream and multiple non-stream drainages are present along this road segment. Existing stream crossing structures are already in place at three of the eight Class I stream crossings and the other five have been removed during past road storage (see below). The first existing structure is located at mile post 4.06 (cell H2) and has 194m of available upstream habitat, based on UA surveys. This crossing has water eddying around the inlet and outlet of cmp and has caused the road prism to erode. The second existing structure is located at mile post 4.36 (cell H3) and has 47m of available upstream habitat, based on GIS. The third existing structure is located at mile post 4.63 (cell G4) and has 288m of available upstream habitat, based on GIS. Road-stream crossings, stream characteristics, and fish information was based on the most recent RCS data, along with additional survey information. GIS stream locations do not always match the RCS data. A log culvert, log bridge, or bridge will be installed at fish stream crossings. All structures that do not meet fish passage standards (red pipes) would be removed during road storage.

## Appendix 2

<b>A) MP 4.39</b>	<b>AHMU Class I</b>	<b>Channel Type HCO</b>	<b>Substrate FGR-GR</b>
<b>Max. Width 0.4m</b>	<b>Max. Depth</b>	<b>Gradient 7-9%</b>	
<b>Structure Log Culvert</b>	<b>Passage Yes</b>	<b>Timing dates 7/18-8/15</b>	

**Narrative:** This crossing is located in cell G3 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Steelhead trout, coho salmon and Dolly Varden char presence have been verified. Available upstream habitat is 274m, based on GIS. Instream work related to the crossing, if any, will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

<b>B) MP 4.51</b>	<b>AHMU Class I</b>	<b>Channel Type AFM</b>	<b>Substrate GR-BD</b>
<b>Max. Width 5.5m</b>	<b>Max. Depth</b>	<b>Gradient 2-5%</b>	
<b>Structure Bridge</b>	<b>Passage Yes</b>	<b>Timing dates 7/18-8/15</b>	

**Narrative:** This crossing is located in cell G4 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Steelhead trout, coho salmon and Dolly Varden char presence have been verified. Available upstream habitat is 1,745 m, based on GIS. Instream work related to the crossing will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

<b>C) MP 5.44</b>	<b>AHMU Class I</b>	<b>Channel Type MCS</b>	<b>Substrate BD-BR</b>
<b>Max. Width 7.3m</b>	<b>Max. Depth</b>	<b>Gradient 4-5%</b>	
<b>Structure Bridge</b>	<b>Passage Yes</b>	<b>Timing dates 7/18-8/15</b>	

**Narrative:** This crossing is located along the southern edge of cell E7 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Steelhead trout, coho salmon and Dolly Varden char presence have been verified. Available upstream habitat is 616m, based on GIS. Instream work related to the crossing will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

<b>D) MP 5.55</b>	<b>AHMU Class I</b>	<b>Channel Type HCL</b>	<b>Substrate BD-BR</b>
<b>Max. Width 5m</b>	<b>Max. Depth</b>	<b>Gradient 6-10%</b>	
<b>Structure Bridge</b>	<b>Passage Yes</b>	<b>Timing dates 7/18-8/15</b>	

**Narrative:** This crossing is centrally located in cell E8 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Steelhead trout, coho salmon and Dolly Varden char presence have been verified. Available upstream habitat is 185m, based on GIS. Instream work related to the crossing will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

<b>E) MP 5.65</b>	<b>AHMU Class I</b>	<b>Channel Type HCL</b>	<b>Substrate BD-BR</b>
<b>Max. Width 6m</b>	<b>Max. Depth</b>	<b>Gradient 6-10%</b>	
<b>Structure Bridge</b>	<b>Passage Yes</b>	<b>Timing dates 7/18-8/15</b>	

**Narrative:** This crossing is located along the southern edge of cell E8 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Steelhead trout, coho salmon and Dolly Varden char presence have been verified. Available upstream habitat is 1,544 m, based on GIS. Instream work related to the crossing will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

### Other Resource Information

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** No concerns.

**Botany:** No concerns

**Invasive Species:** Orange hawkweed and perennial sowthistle are known within the first 3 miles of the NFS road 3012000. Monitoring will be done to ensure that infestations do not spread as a result of the project activities.

**Lands/Minerals/Geology/Karst:** No concerns

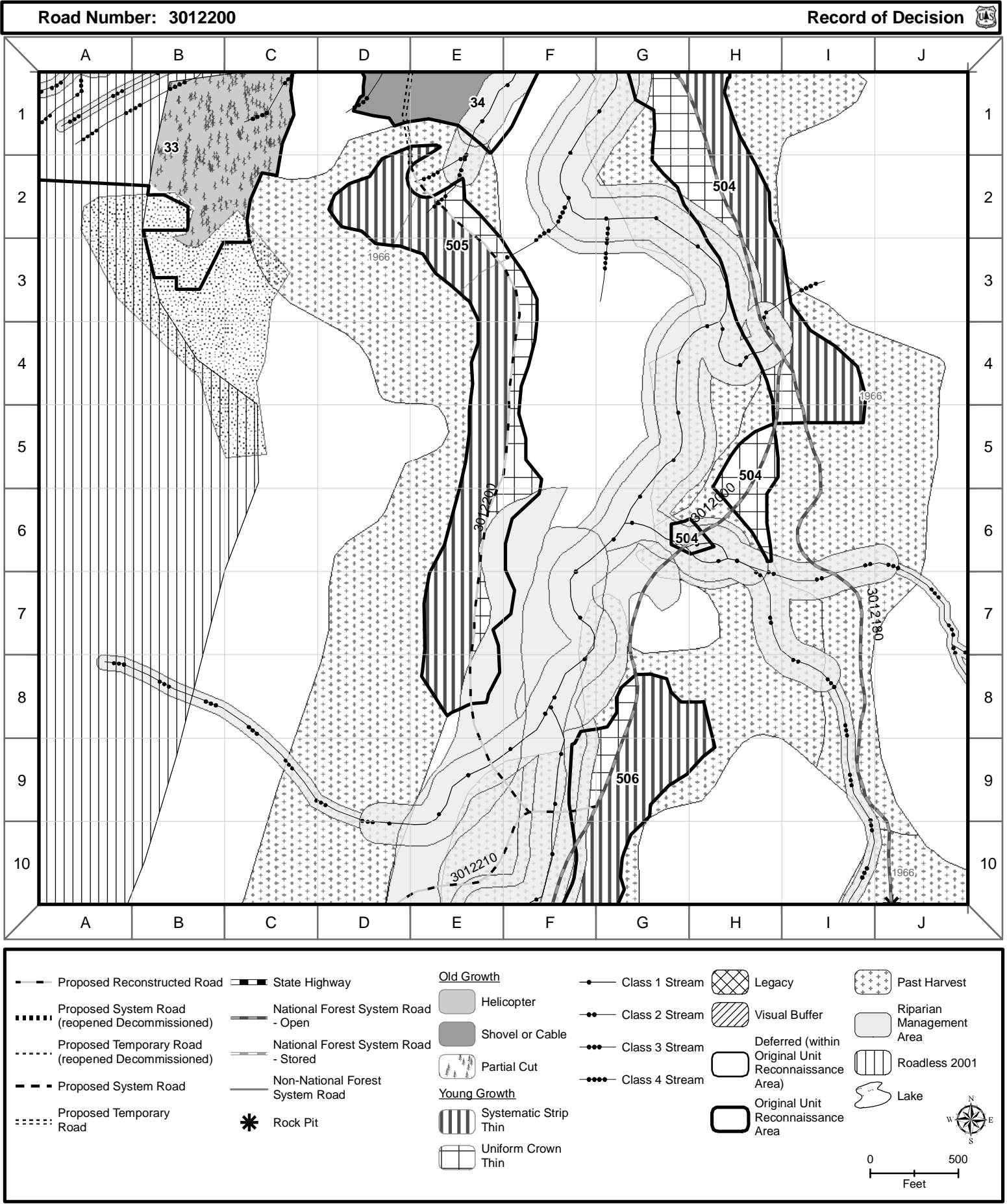
**Soil and Water:**

There are multiple areas along this road segment in which water from non-streams and Class IV streams is collecting in blocked inboard ditches or flowing down the road causing the road prism to erode. Inboard ditches need to be cleared and established and structures installed so as not to impede natural flows. Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities plus a period of 1 to 5 years. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** No concerns

**Heritage Resources:** No concerns

Appendix 2





**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Timber Production

**Route No**  
3012200

**Route Name**

**Begin Terminus**  
3012000 MP 3.05

**End Terminus**  
Proposed Temporary Road

**Begin MP**  
0.00

**Length**  
0.84

**Status**  
Existing

## General Design Criteria and Elements

<b><u>Functional</u></b>	<b><u>Service</u></b>		<b><u>Design</u></b>			
<b><u>Class</u></b>	<b><u>Life</u></b>	<b><u>Surface</u></b>	<b><u>Width</u></b>	<b><u>Speed</u></b>	<b><u>Critical Vehicle</u></b>	<b><u>Design Vehicle</u></b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

## Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities are completed, the road would be placed in storage and would not be designated for public motor vehicle use. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

## Maintenance Criteria

<b><u>Bmp</u></b>	<b><u>Emp</u></b>	<b><u>Operational Maintenance Level (Current Condition)</u></b>	<b><u>Objective Maintenance Level (Desired Future Condition)</u></b>	<b><u>Alaska Forest Practices Act Class</u></b>
0.00	0.84	2	1	Active during haul, Inactive while stored

## Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul road will be stored and maintained in "Inactive" status.

## ATM

**STORAGE/FOOT TRAVEL** A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

## Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road

# Appendix 2

<b>Traffic Management Strategies</b>	<b>Encourage:</b>	N/A
	<b>Accept:</b>	Non-motorized use after road is closed year round.
	<b>Discourage:</b>	N/A
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

**Travel Management Narrative:**

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

**Approved**           /s/ Rachelle Huddleston-Lorton            
District Ranger

          June 28, 2013            
Date

### Site Specific Design Criteria Road 3012200

#### Route Basics:

The purpose of this road is to access Units 597.2-505 and 597.2-34 and provide helicopter landings for Unit 597.2-33. The proposed road reconstruction has an approximate length of 0.84 mile. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 3012000.

#### Road Location:

Road accesses Units 597.2-505 and 597.2-34 and provide helicopter landings for Unit 597.2-33. Grades are favorable to 9%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

#### Wetlands:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

#### Erosion Control:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

#### Rock Pits:

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6) Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

#### Stream Crossings:

This road segment crosses two Class I streams, two Class IV streams and occasional non-stream drainages. An existing stream crossing structure is already in place at one of the two Class I stream crossings and the other has been removed during past road storage (see below). The existing structure (red pipe) is located at mile post 0.139 (cell E9) and has 242m of available upstream habitat, based on GIS. Road-stream crossings, stream characteristics, and fish information was based on the most recent RCS data, along with additional survey information. GIS stream locations do not always match the RCS data. A log culvert, log bridge, or bridge will be installed at fish stream crossings. All structures that do not meet fish passage standards (red pipes) would be removed during road storage.

<b>A) MP 0.04</b>	<b>AHMU Class I</b>	<b>Channel Type FPM</b>	<b>Substrate GR</b>
<b>Max. Width: 14m</b>	<b>Max. Depth:</b>	<b>Gradient: 1%</b>	
<b>Structure: Bridge</b>	<b>Passage: Yes</b>	<b>Timing dates: 7/18-8/15</b>	

**Narrative:** This crossing is located in cell F9 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Steelhead trout, coho salmon and Dolly Varden char presence have been verified. Available upstream habitat is 5,190m, based on GIS. Instream work related to the crossing will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work. (Note: This is the Rio Beaver Creek crossing and a verified Class I stream. RCS data, however, shows this stream as a Class IV and is inaccurate).

# Appendix 2

## **Other Resource Information**

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** No concerns.

**Botany:** No concerns

**Invasive Species:** No concerns

**Lands/Minerals/Geology/Karst:** No concerns

### **Soil and Water:**

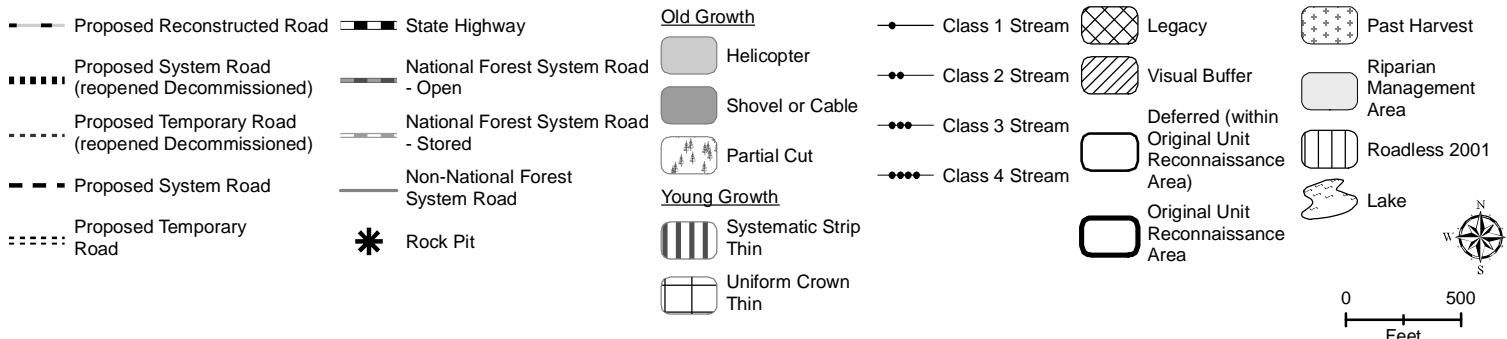
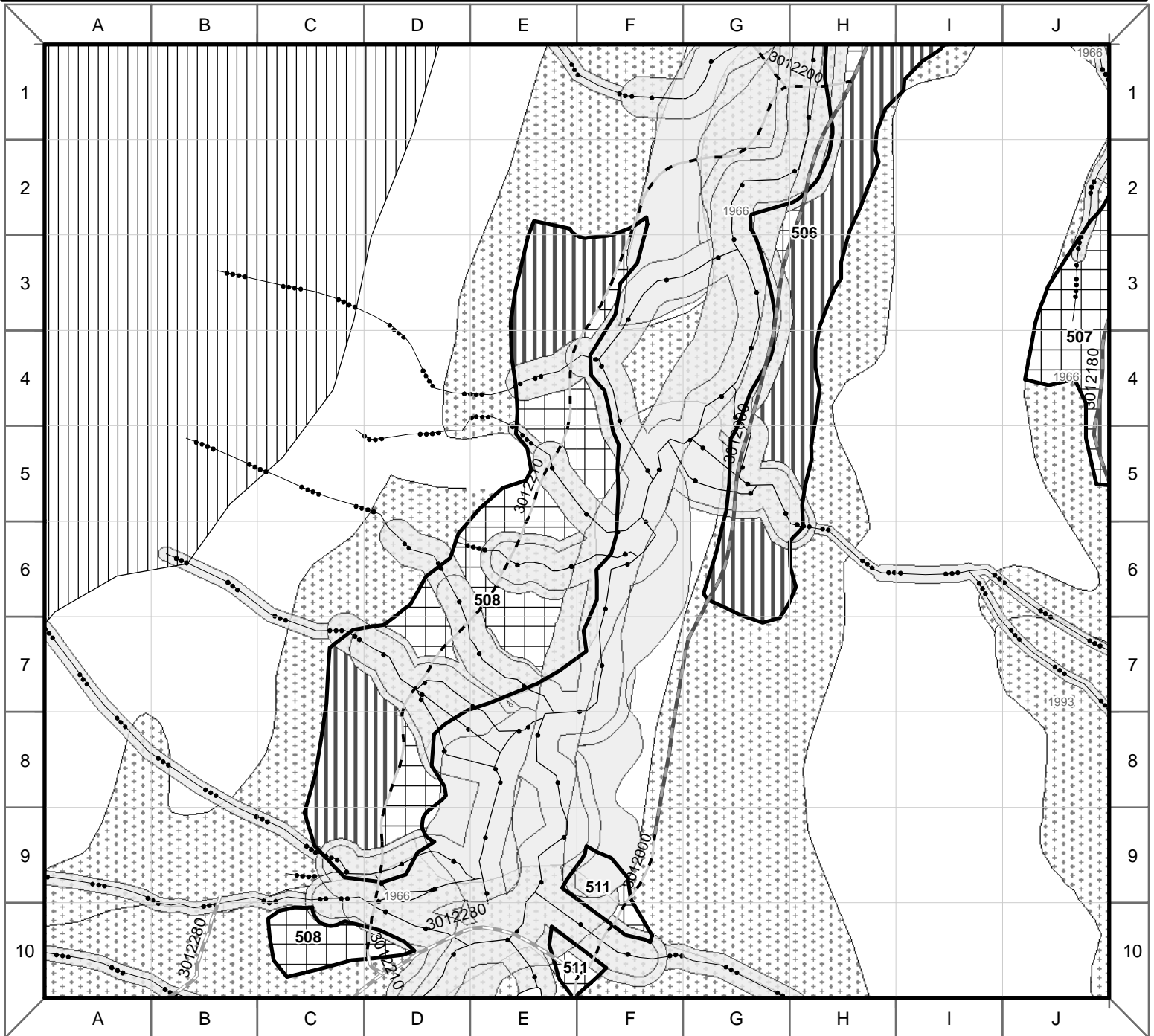
There are multiple areas along this road segment in which water from non-streams and Class IV streams is collecting in blocked inboard ditches or flowing down the road causing the road prism to erode. Inboard ditches need to be cleared and established and structures installed so as not to impede natural flows. Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** No concerns

**Heritage Resources:** No concerns

Road Number: 3012210

Record of Decision



# Appendix 2

**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Timber Production

**Route No**  
3012210

**Route Name**

**Begin Terminus**  
3012200 MP 0.07

**End Terminus**  
Unit 597.2-508

**Begin MP**  
0.00

**Length**  
1.16

**Status**  
Existing

## General Design Criteria and Elements

<b><u>Functional Class</u></b>	<b><u>Service Life</u></b>	<b><u>Surface</u></b>	<b><u>Width</u></b>	<b><u>Design Speed</u></b>	<b><u>Critical Vehicle</u></b>	<b><u>Design Vehicle</u></b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

### Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities are completed, the road would be placed in storage and would not be designated for public motor vehicle use. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

### Maintenance Criteria

<b><u>Bmp</u></b>	<b><u>Emp</u></b>	<b><u>Operational Maintenance Level (Current Condition)</u></b>	<b><u>Objective Maintenance Level (Desired Future Condition)</u></b>	<b><u>Alaska Forest Practices Act Class</u></b>
0.00	1.16	2	1	Active during haul, Inactive while stored

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul road will be stored and maintained in "Inactive" status.

### ATM

STORAGE/FOOT TRAVEL A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

### Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road

<b>Traffic Management Strategies</b>	<b>Encourage:</b>	N/A
	<b>Accept:</b>	Non-motorized use after road is closed year round.
	<b>Discourage:</b>	N/A
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

## Travel Management Narrative:

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level 1) and is in a self-maintaining status.

Approved /s/ Rachelle Huddleston-Lorton  
District Ranger

June 28, 2013  
Date

# Appendix 2

## Site Specific Design Criteria Road 3012210

### Route Basic:

The purpose of this road is to access Unit 597.2-508. The proposed road reconstruction has an approximate length of 0.84 mile. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 3012000.

### Road Location:

Road accesses Unit 597.2-508. Grades are favorable to 8%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

### Wetlands:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

### Erosion Control:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

### Rock Pits:

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6) Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

### Stream Crossings:

Seven Class I streams, two Class II streams and multiple non-stream drainages are present along this road segment. Existing stream crossing structures are already in place at two of the seven Class I stream crossings and the other five had been removed during past road storage (listed below). The first existing structure is located at mile post 0.66 (cell E6) and has 2m of available upstream habitat, based on GIS. The second existing structure (red pipe) is located at mile post 0.76 (cell D7) and has 100m of available upstream habitat, based on UA surveys. This crossing has been diverted and is eroding the road prism. An existing stream crossing structure is already in place at one of the two Class II stream crossings and the other has been removed during past road storage (listed below). The existing structure is located at mile post 0.43 (cell E4) and has 91m of available upstream habitat, based on GIS. Road-stream crossings, stream characteristics, and fish information was based on the most recent RCS data, along with available additional survey information. GIS stream locations do not always match the RCS data. A log culvert, log bridge, or bridge will be installed at fish stream crossings. All structures that do not meet fish passage standards (red pipes) would be removed during road storage.

<b>A) MP 0.54</b>	<b>AHMU Class I</b>	<b>Channel Type MMO</b>	<b>Substrate O-GR</b>
<b>Max. Width 1.5m</b>	<b>Max. Depth</b>	<b>Gradient 2-4%</b>	
<b>Structure Log Culvert</b>	<b>Passage Yes</b>	<b>Timing dates 7/18-8/15</b>	
<b>Narrative:</b> This crossing is located in cell G3 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Steelhead trout, coho salmon and Dolly Varden char presence have been verified. Available upstream habitat is 7m, based on GIS. Instream work related to the crossing, if any, will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.			
<b>B) MP 0.84</b>	<b>AHMU Class I</b>	<b>Channel Type AFH</b>	<b>Substrate SI-BD</b>
<b>Max. Width 5m</b>	<b>Max. Depth</b>	<b>Gradient 3-20%</b>	



**Structure** Log Culvert/Bridge      **Passage** Yes      **Timing dates** 7/18-8/15

**Narrative:** This crossing is located in cell D7 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Steelhead trout, coho salmon and Dolly Varden char presence have been verified. Available upstream habitat is 167m, based on GIS. This crossing is in a large alluvial fan that has multiple large active channels with high bedload transportation that has caused the road prism to wash out. Instream work related to the crossing will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

**C) MP 1.05**      **AHMU Class II**      **Channel Type** AFH      **Substrate** SI-GR

**Max. Width** 4m

**Max. Depth**

**Gradient** 3-15%

**Structure** Log Culvert/Bridge

**Passage** Yes

**Timing dates** 7/25-9/01

**Narrative** This crossing is located in cell D9 on the road card map. GIS and, therefore, the road card map depict this stream at the road crossing as a Class I. GIS was not updated at the time that the road card map was created. The structure that will be installed at this crossing will be designed to accomplish fish passage. Cutthroat trout and Dolly Varden char presence have been verified. Available upstream habitat is 194m, based on UA surveys. This crossing is in a large alluvial fan that has multiple large active channels with high bedload transportation that has caused the road prism to wash out. Instream work related to the crossing will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

**D) MP 1.06**      **AHMU Class I**      **Channel Type** AFH      **Substrate** SI-GR

**Max. Width** 4m

**Max. Depth**

**Gradient** 3-15%

**Structure** Log Culvert/Bridge

**Passage** Yes

**Timing dates** 7/18-8/15

**Narrative:** This crossing is located in cell D9 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Steelhead trout, coho salmon and Dolly Varden char presence have been verified. Available upstream habitat is 14m, based on GIS. This crossing is in a large alluvial fan that has multiple large active channels with high bedload transportation that has caused the road prism to wash out. Instream work related to the crossing will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

**E) MP 1.08**      **AHMU Class I**      **Channel Type** AFH      **Substrate** SA-GR

**Max. Width** 4m

**Max. Depth**

**Gradient** 3-15%

**Structure** Log Culvert/Bridge

**Passage** Yes

**Timing dates** 7/18-8/15

**Narrative:** This crossing is located in cell D9 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Steelhead trout, coho salmon and Dolly Varden char presence have been verified. Available upstream habitat is 83m, based on GIS. This crossing is in a large alluvial fan that has multiple large active channels with high bedload transportation that has caused the road prism to wash out. Instream work related to the crossing will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

**F) MP 1.09**      **AHMU Class II**      **Channel Type** AFH      **Substrate** SA-GR

**Max. Width** 3m

**Max. Depth**

**Gradient** 15%

**Structure** Log Culvert/Bridge

**Passage** Yes

**Timing dates** 7/18-8/15

**Narrative:** This crossing is located in cell D10 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Dolly Varden char presence has been verified. Available upstream habitat is 15m, based on GIS. This crossing is in a large alluvial fan that has multiple large active channels with high bedload transportation that has caused the road prism to wash out. Instream work related to the crossing will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

## **Other Resource Information**

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** No concerns.

## Appendix 2

**Botany:** No concerns

**Invasive Species:** No concerns

**Lands/Minerals/Geology/Karst:** No concerns

**Soil and Water:**

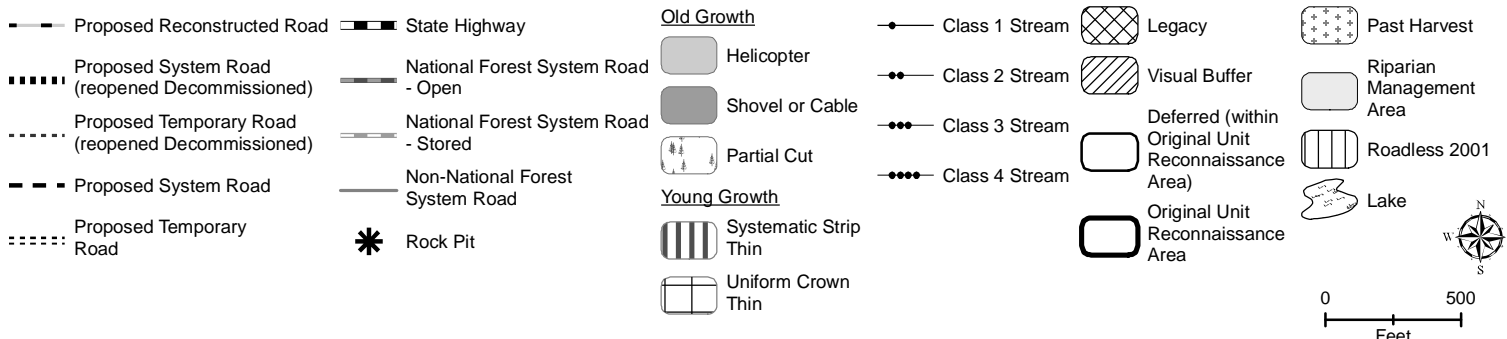
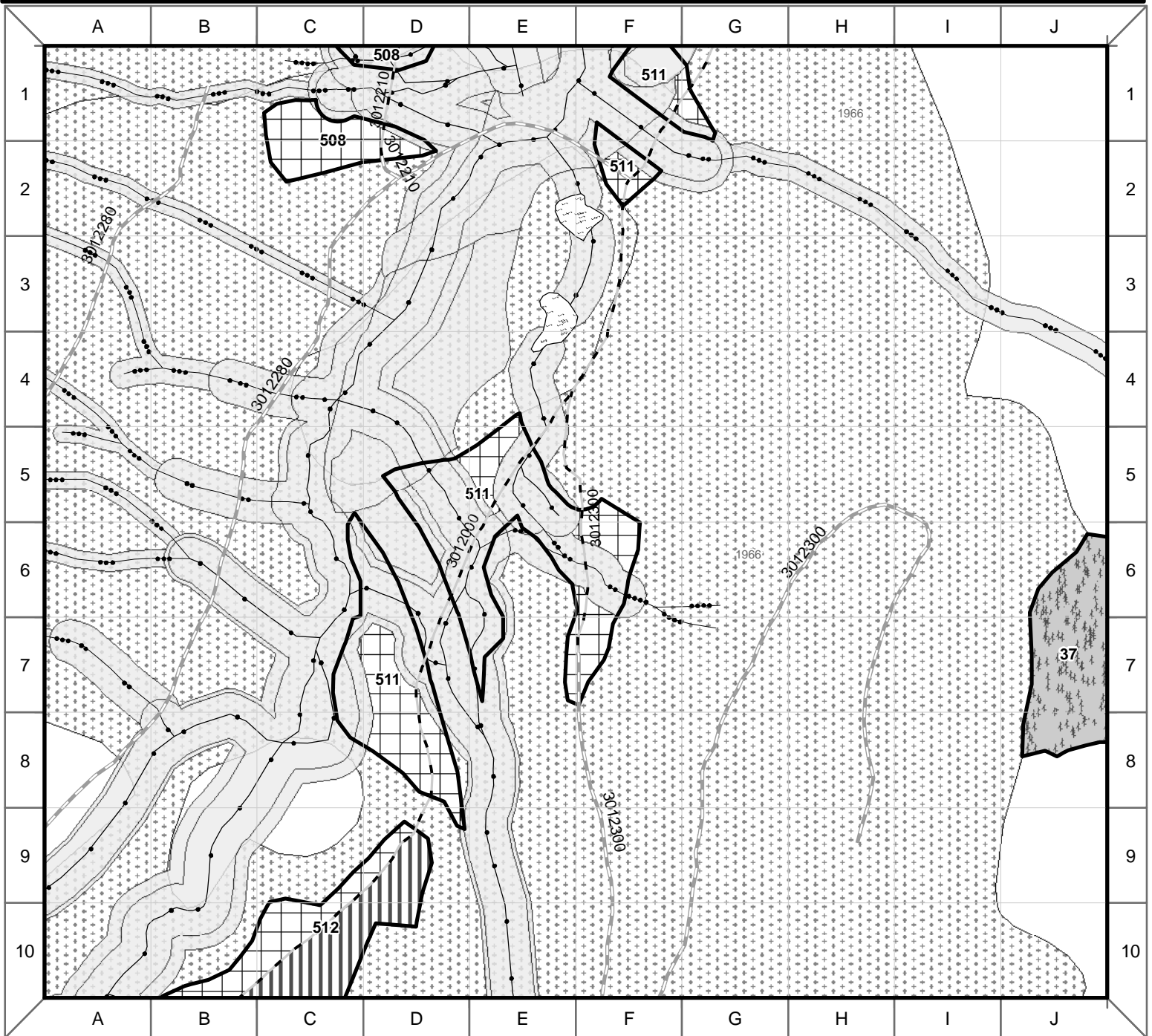
There are a couple of areas along this road segment in which water from non-streams is collecting in blocked inboard ditches or flowing down the road causing the road prism to erode. Inboard ditches need to be cleared and established and structures installed so as not to impede natural flows. Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** No concerns

**Heritage Resources:** No concerns

Road Number: 3012300

Record of Decision



## Appendix 2

**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Timber Production

**Route No**  
3012300

**Route Name**

**Begin Terminus**  
3012200 MP 4.31

**End Terminus**  
Unit 597.2-511

**Begin MP**  
0.00

**Length**  
0.25

**Status**  
Existing

### General Design Criteria and Elements

<b><u>Functional</u></b>	<b><u>Service</u></b>		<b><u>Design</u></b>			
<b><u>Class</u></b>	<b><u>Life</u></b>	<b><u>Surface</u></b>	<b><u>Width</u></b>	<b><u>Speed</u></b>	<b><u>Critical Vehicle</u></b>	<b><u>Design Vehicle</u></b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

### Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities road would remain open shown on the Motor Vehicle Use Map, to highway legal vehicles, seasonal from May 1 to November 30 for 1 to 5 years to allow for firewood removal and other incidental uses. At the end of 1 to 5 years road is not designated for public motor vehicle use and would be placed in storage. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

### Maintenance Criteria

<b><u>Bmp</u></b>	<b><u>Emp</u></b>	<b><u>Operational Maintenance Level (Current Condition)</u></b>	<b><u>Objective Maintenance Level (Desired Future Condition)</u></b>	<b><u>Alaska Forest Practices Act Class</u></b>
0.00	0.25	2	1	Active during haul, Inactive while stored

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul and firewood removal, road will be stored and maintained in "Inactive" status.

### ATM

STORAGE/FOOT TRAVEL A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

### Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road

<b>Traffic Management Strategies</b>	<b>Encourage:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30
	<b>Accept:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30 Non-motorized use after road is closed year round.
	<b>Discourage:</b>	1 to 5 years after timber sale activities Passenger Vehicle from May 1 to November 30
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

## Travel Management Narrative:

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

Approved /s/ Rachelle Huddleston-Lorton  
District Ranger

June 28, 2013  
Date

# Appendix 2

## Site Specific Design Criteria Road 3012300

### Route Basics:

The purpose of this road is to access Unit 597.2-511. The proposed road reconstruction has an approximate length of 0.25 mile. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 3012000.

### Road Location:

Road accesses Unit 597.2-511. Grades are favorable to 13%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

### Wetlands:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

### Erosion Control:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

### Rock Pits:

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6) Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

### Stream Crossings:

One Class II stream crossing is present at mile post 0.16 (cell F6) and an existing structure is already in place. The stream has 77m of available upstream habitat, based on GIS. One Class IV and multiple non-stream drainages are present along this road segment. Road-stream crossings, stream characteristics, and fish information was based on the most recent RCS data, along with additional survey information. GIS stream locations do not always match the RCS data. All structures that do not meet fish passage standards (red pipes) would be removed during road storage. If necessary, an additional survey would be conducted during storage to determine fish presence and timing restrictions. Instream work related to the crossing, if any, would be carried out under current timing restrictions and concurrence from the State would be solicited prior to starting the work.

### Other Resource Information

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** No concerns

**Botany:** No concerns

**Invasive Species:** No concerns

**Lands/Minerals/Geology/Karst:** No concerns

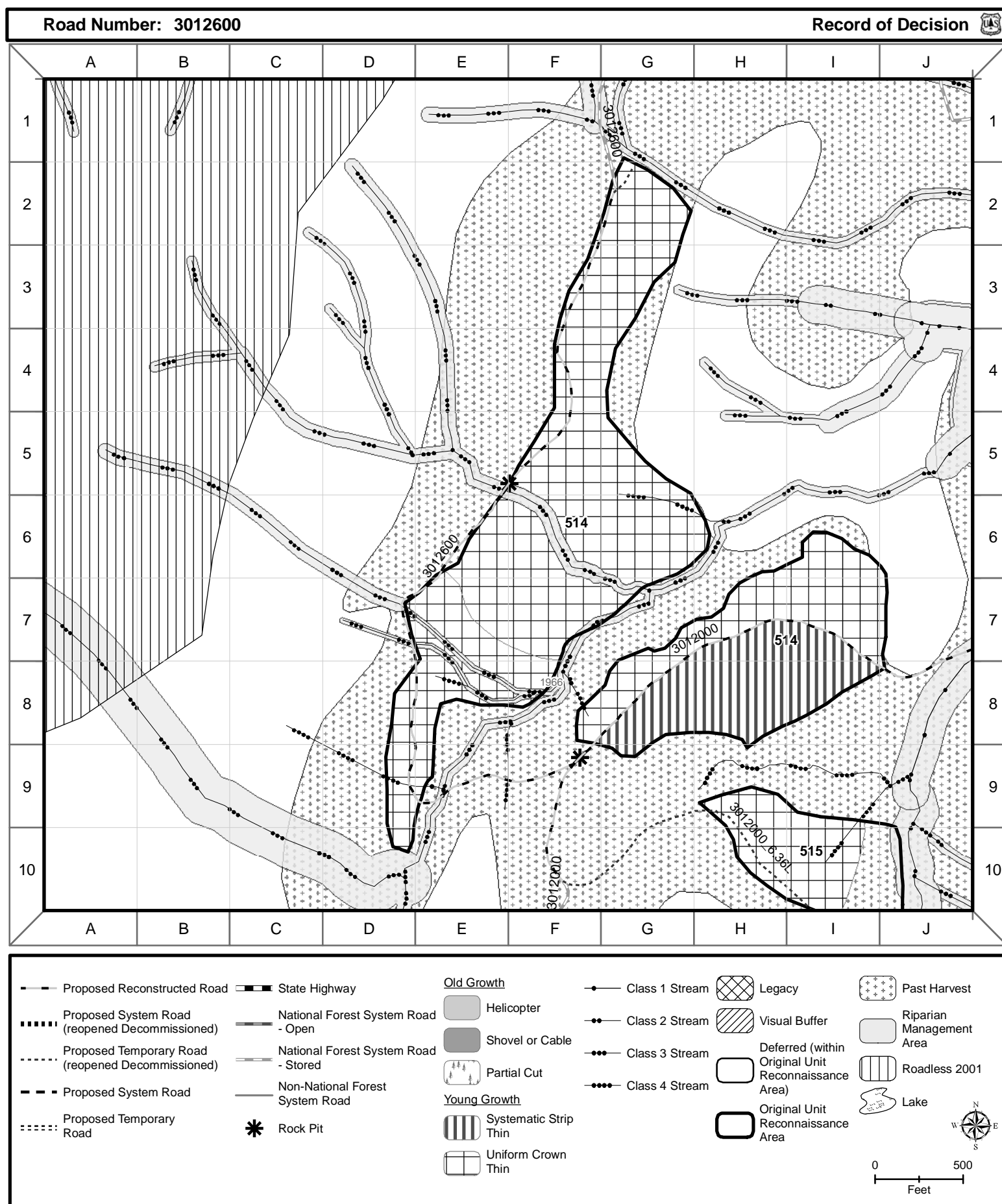
**Soil and Water:**

There are a couple of areas along this road segment in which water from non-streams is collecting in blocked inboard ditches or flowing down the road causing the road prism to erode. Inboard ditches need to be cleared and established and structures installed so as not to impede natural flows. Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities plus a period of 1 to 5 years. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** No concerns

**Heritage Resources:** No concerns

## Appendix 2





**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Timber Production

**Route No**  
3012600

**Route Name**

**Begin Terminus**  
3012200 MP 6.31

**End Terminus**  
Unit 597.2-514

**Begin MP**  
0.00

**Length**  
0.94

**Status**  
Existing

### General Design Criteria and Elements

<b>Functional</b>	<b>Service</b>			<b>Design</b>		
<b>Class</b>	<b>Life</b>	<b>Surface</b>	<b>Width</b>	<b>Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

### Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities road would remain open shown on the Motor Vehicle Use Map, to highway legal vehicles, seasonal from May 1 to November 30 for 1 to 5 years to allow for firewood removal and other incidental uses. At the end of 1 to 5 years road is not designated for public motor vehicle use and would be placed in storage. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

### Maintenance Criteria

<u>Bmp</u>	<u>Emp</u>	<u>Operational Maintenance Level (Current Condition)</u>	<u>Objective Maintenance Level (Desired Future Condition)</u>	<u>Alaska Forest Practices Act Class</u>
0.00	0.94	2	1	Active during haul, Inactive while stored

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul and firewood removal, road will be stored and maintained in "Inactive" status.

### ATM

**STORAGE/FOOT TRAVEL** A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

### Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road

# Appendix 2

<b>Traffic Management Strategies</b>	<b>Encourage:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30
	<b>Accept:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30 Non-motorized use after road is closed year round.
	<b>Discourage:</b>	1 to 5 years after timber sale activities Passenger Vehicle from May 1 to November 30
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

**Travel Management Narrative:**

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

Approved /s/ Rachelle Huddleston-Lorton  
District Ranger

June 28, 2013  
Date

### Site Specific Design Criteria Road 3012600

#### Route Basics:

The purpose of this road is to access Unit 597.2-514. The proposed road reconstruction has an approximate length of 0.94 mile. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 3012000.

#### Road Location:

Road accesses Unit 597.2-514. Grades are favorable to 18%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

#### Wetlands:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

#### Erosion Control:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

#### Rock Pits:

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6) Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

#### Stream Crossings:

Four Class III streams, nine Class IV streams and multiple non-stream drainages are present along this road segment. Road-stream crossings, stream characteristics, and fish information was based on the most recent RCS data, along with additional survey information. GIS stream locations do not always match the RCS data.

<b>A) MP 0.16</b>	<b>AHMU Class III</b>	<b>Channel Type HCM</b>	<b>Substrate GR-BD</b>
<b>Max. Width</b> 3.9m	<b>Max. Depth</b>	<b>Gradient</b> 7-9%	
<b>Structure</b> CMP/Bridge	<b>Passage</b> No	<b>Timing</b> dates	
<b>Narrative:</b> This crossing is located in cell E9 on the road card map.			

<b>B) MP 0.35</b>	<b>AHMU Class III</b>	<b>Channel Type HCO</b>	<b>Substrate SA-CO</b>
<b>Max. Width</b> 1m	<b>Max. Depth</b>	<b>Gradient</b> 86%	
<b>Structure</b> CMP	<b>Passage</b> No	<b>Timing</b> dates	
<b>Narrative:</b> This crossing is located along the southeastern edge of cell D7 on the road card map.			

<b>C) MP 0.40</b>	<b>AHMU Class III</b>	<b>Channel Type HCO</b>	<b>Substrate GR-BD</b>
<b>Max. Width</b> 3.8m	<b>Max. Depth</b>	<b>Gradient</b> 24%	
<b>Structure</b> CMP/Bridge	<b>Passage</b> No	<b>Timing</b> dates	
<b>Narrative:</b> This crossing is located along the southeastern edge of cell D7 on the road card map.			

# Appendix 2

D) MP 0.57	AHMU Class III	Channel Type HCD	Substrate SA-BD
Max. Width 1.8m	Max. Depth	Gradient 71%	
Structure CMP/Bridge	Passage No	Timing dates	
Narrative: This crossing is located in cell E5 on the road card map.			

## Other Resource Information

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** No concerns.

**Botany:** No concerns

**Invasive Species:** No concerns

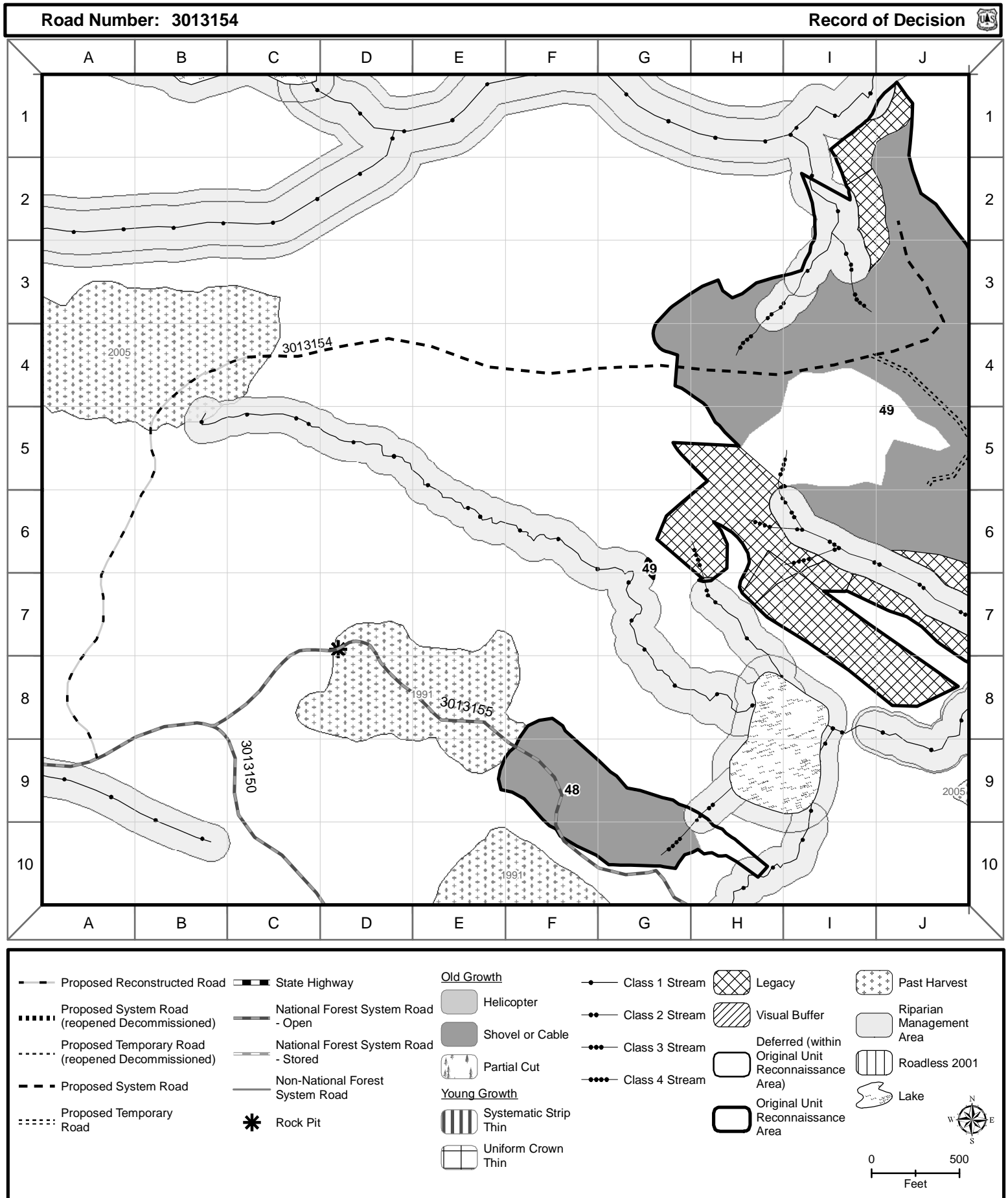
**Lands/Minerals/Geology/Karst:** No concerns

### Soil and Water:

There are many areas along this road segment in which water from rills, non-streams or Class IV streams is collecting in blocked inboard ditches or flowing down the road causing the road prism to erode. Inboard ditches need to be cleared and established and structures installed so as not to impede natural flows. Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities plus a period of 1 to 5 years. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** No concerns

**Heritage Resources:** No concerns



# Appendix 2

**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Timber Production  
Modified Landscape

**Route No**  
3013154

**Route Name**

**Begin Terminus**  
3013150 MP 0.75

**End Terminus**  
Proposed System Road 3013154

**Begin MP**  
0.00

**Length**  
0.53

**Status**  
Existing

## General Design Criteria and Elements

<b><u>Functional</u></b>	<b><u>Service</u></b>		<b><u>Design</u></b>			
<b><u>Class</u></b>	<b><u>Life</u></b>	<b><u>Surface</u></b>	<b><u>Width</u></b>	<b><u>Speed</u></b>	<b><u>Critical Vehicle</u></b>	<b><u>Design Vehicle</u></b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

## Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities road would remain open shown on the Motor Vehicle Use Map, to highway legal vehicles, seasonal from May 1 to November 30 for 1 to 5 years to allow for firewood removal and other incidental uses. At the end of 1 to 5 years road is not designated for public motor vehicle use and would be placed in storage. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

## Maintenance Criteria

<b><u>Bmp</u></b>	<b><u>Emp</u></b>	<b><u>Operational Maintenance Level (Current Condition)</u></b>	<b><u>Objective Maintenance Level (Desired Future Condition)</u></b>	<b><u>Alaska Forest Practices Act Class</u></b>
0.00	0.53	2	1	Active during haul, Inactive while stored

## Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul and firewood removal, road will be stored and maintained in "Inactive" status.

## ATM

**STORAGE/FOOT TRAVEL** A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

## Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road

<b>Traffic Management Strategies</b>	<b>Encourage:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30
	<b>Accept:</b>	1 to 5 years after timber sale activities High Clearance Vehicle from May 1 to November 30 Non-motorized use after road is closed year round.
	<b>Discourage:</b>	1 to 5 years after timber sale activities Passenger Vehicle from May 1 to November 30
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

## Travel Management Narrative:

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

Approved /s/ Rachelle Huddleston-Lorton  
District Ranger

June 28, 2013  
Date

# Appendix 2

## Site Specific Design Criteria Road 3013154

### Route Basics:

The purpose of this road is to access Unit 597.2-049. The proposed road reconstruction has an approximate length of 0.53 mile. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 3013150.

### Road Location:

Road accesses Unit 597.2-049. Grades are adverse to 10%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

### Wetlands:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

### Erosion Control:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

### Rock Pits:

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6) Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

### Stream Crossings:

This road does not cross any Class I, II, or III streams. This information is based on GIS data because no RCS data are available for this road. Additional project-specific surveys will be conducted prior to implementation. Any new fish stream crossings will be a log culvert, log bridge, or bridge. Applicable BMPs include 12.6, 12.6a, 13.16, 14.6, 14.14, and 14.16.

### Other Resource Information

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** No concerns

**Botany:** No concerns

**Invasive Species:** No concerns

**Lands/Minerals/Geology/Karst:** No concerns

**Soil and Water:** Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities plus a period of 1 to 5 years. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs

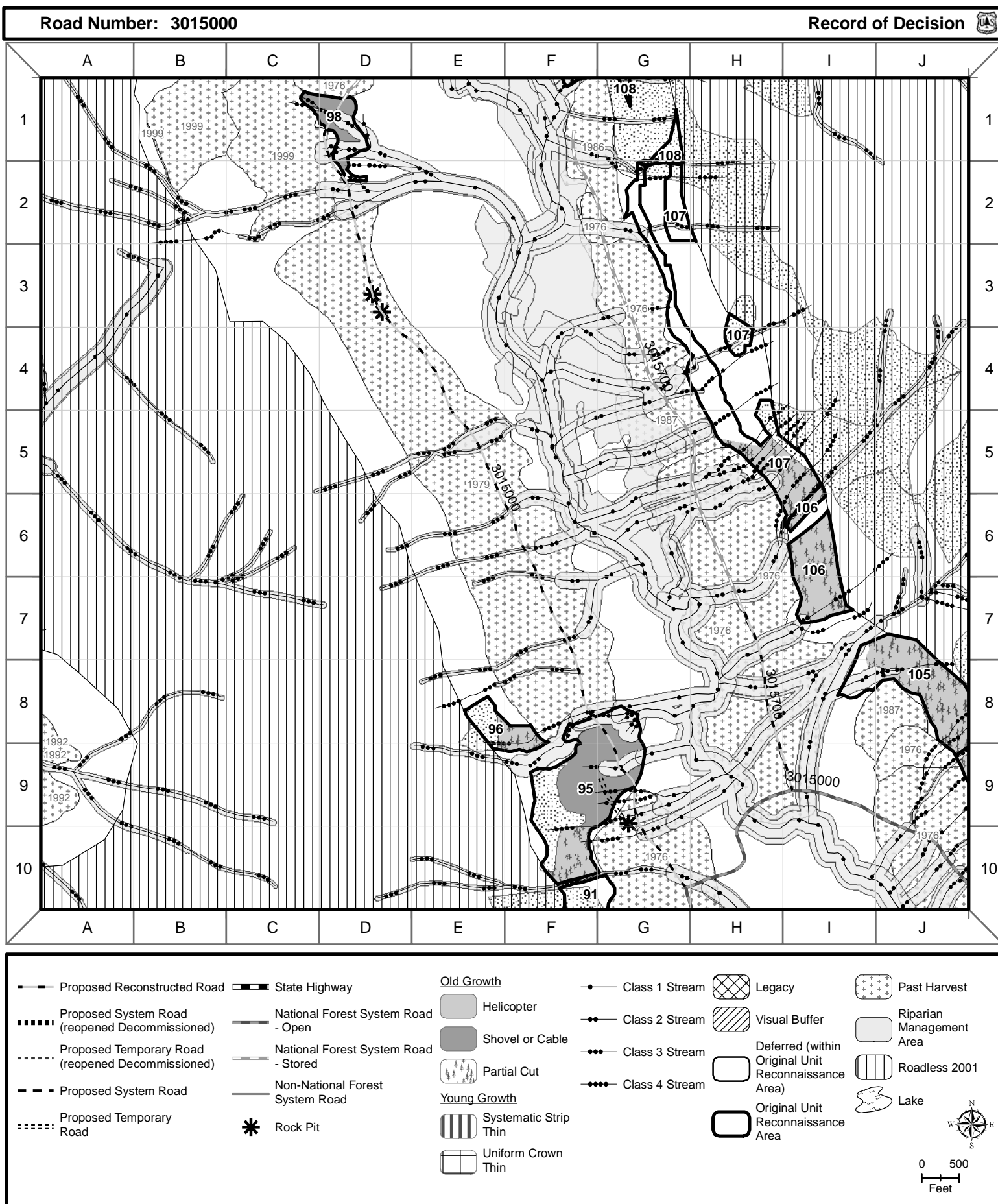


Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** No concerns

**Heritage Resources:** No concerns

## Appendix 2



**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Timber Production

**Route No**  
3015000

**Route Name**

**Begin Terminus**  
3015000 MP 9.12

**End Terminus**  
Unit 580-098

**Begin MP**  
9.16

**Length**  
2.26

**Status**  
Existing

## General Design Criteria and Elements

<b><u>Functional</u></b>	<b><u>Service</u></b>		<b><u>Design</u></b>			
<b><u>Class</u></b>	<b><u>Life</u></b>	<b><u>Surface</u></b>	<b><u>Width</u></b>	<b><u>Speed</u></b>	<b><u>Critical Vehicle</u></b>	<b><u>Design Vehicle</u></b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

## Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities are completed, the road would be placed in storage and would not be designated for public motor vehicle use. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

## Maintenance Criteria

<b><u>Bmp</u></b>	<b><u>Emp</u></b>	<b><u>Operational Maintenance Level (Current Condition)</u></b>	<b><u>Objective Maintenance Level (Desired Future Condition)</u></b>	<b><u>Alaska Forest Practices Act Class</u></b>
9.16	11.42	2	1	Active during haul, Inactive while stored

## Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul road will be stored and maintained in "Inactive" status.

## ATM

STORAGE/FOOT TRAVEL A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

## Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road

# Appendix 2

<b>Traffic Management Strategies</b>	<b>Encourage:</b>	N/A
	<b>Accept:</b>	Non-motorized use after road is closed year round.
	<b>Discourage:</b>	N/A
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

**Travel Management Narrative:**

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

**Approved**           /s/ Rachelle Huddleston-Lorton            
District Ranger

          June 28, 2013            
Date

## Site Specific Design Criteria Road 3015000

### Route Basics:

The purpose of this road is to access Units 580-96 and 580-98 and reduce helicopter yarding distances to Units 580-96, 580-100, 580-108, and 580-109. The proposed road reconstruction has an approximate length of 2.26 miles. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 3015000.

### Road Location:

Road accesses Units 580-96 and 580-98 and reduce helicopter yarding distances to Units 580-96, 580-100, 580-108, and 580-109. Grades are adverse to 6%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

### Wetlands:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

### Erosion Control:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

### Rock Pits:

Timing will be required on all pit and r/w blasting within ½ mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6) Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

### Stream Crossings:

Nine Class II stream crossings are present along this road segment. Two of the nine Class II stream crossings have been removed during past road storage (see below). Existing stream crossing structures are already in place at seven of the nine Class II stream crossings and are listed as follows: mile post 9.20 (cell G10; available upstream habitat is 6m), mile post 9.38 (cell G9; available upstream habitat is 39m), mile post 9.52 (cell G9; available upstream habitat is 54m), mile post 9.66 (cell F8; available upstream habitat is 52m), mile post 9.68 (cell F8; available upstream habitat is 48m), mile post 11.24 (cell D1; available upstream habitat is 27m), and mile post 11.26 (cell D1; available upstream habitat is 16m). Note: the Class II streams at mile posts 9.38, 9.52, 9.66, 11.24, and 11.26 have been surveyed, however, the Class II streams at mile posts 9.20 and 9.68 have not been surveyed and rely on GIS for estimating available habitat. Eight Class III stream crossings are present along this road segment. Existing stream crossing structures are already in place at every Class III stream crossing and are listed at the following locations: mile post 9.78 (cell F8), mile post 9.87 (cell F7), mile post 10.04 (cell F6/F7), mile post 10.10 (cell F6), mile post 10.22 (cell F6), mile post 10.39 (cell E5), mile post 10.45 (cell E5), and mile post 11.35 (cell D1). Note: the Class III streams at mile posts 9.78 and 11.35 have been surveyed, however, the other six Class III streams have not been surveyed. Six Class IV stream crossings and multiple non-stream drainages are present along this road segment. One of the six Class IV stream crossings is located at mile post 9.34; fish habitat ends at the road (downstream is a Class II) and the Class IV begins at the road with 0.0m of available upstream habitat, based on GIS. Road-stream crossings, stream characteristics, and fish information was based on the most recent RCS data, along with additional survey information. GIS stream locations do not always match the RCS data. All structures that do not meet fish passage standards (red pipes) would be removed during road storage. If necessary, an additional survey would be conducted during storage to determine fish presence and timing restrictions. Instream work related to the crossing, if any, would be carried out under current timing restrictions and concurrence from the State would be solicited prior to starting the work.

## Appendix 2

A) MP 11.09	AHMU Class II	Channel Type HC	Substrate SC-BD
Max. Width	Max. Depth	Gradient 9-15%	
Structure Log Culvert	Passage Yes	Timing dates 6/15 to 9/01	

**Narrative:** This crossing is located in cell D2 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Dolly Varden char presence has been verified. Available upstream habitat is 7m, based on RCS and UA surveys. Instream work related to the crossing, if any, will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

B) MP 11.13	AHMU Class II	Channel Type HCM	Substrate CO-BR
Max. Width 2.5m	Max. Depth	Gradient 12-15%	
Structure Log Culvert	Passage Yes	Timing dates 6/15 to 9/01	

**Narrative:** This crossing is located in cell D2 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Dolly Varden char presence has been verified. Available upstream habitat is 8m, based on UA surveys and GIS. Instream work related to the crossing, if any, will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

### Other Resource Information

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** Crosses the two remaining east-west travel corridors between areas of past harvest on the west side of the North Thorne drainage; concerns in this area also raised by ADF&G about wolves. Recommend road storage as early as possible after harvest operations because of access into the upper North Thorne River watershed and the general unroaded character of the area.

**Botany:** No concerns

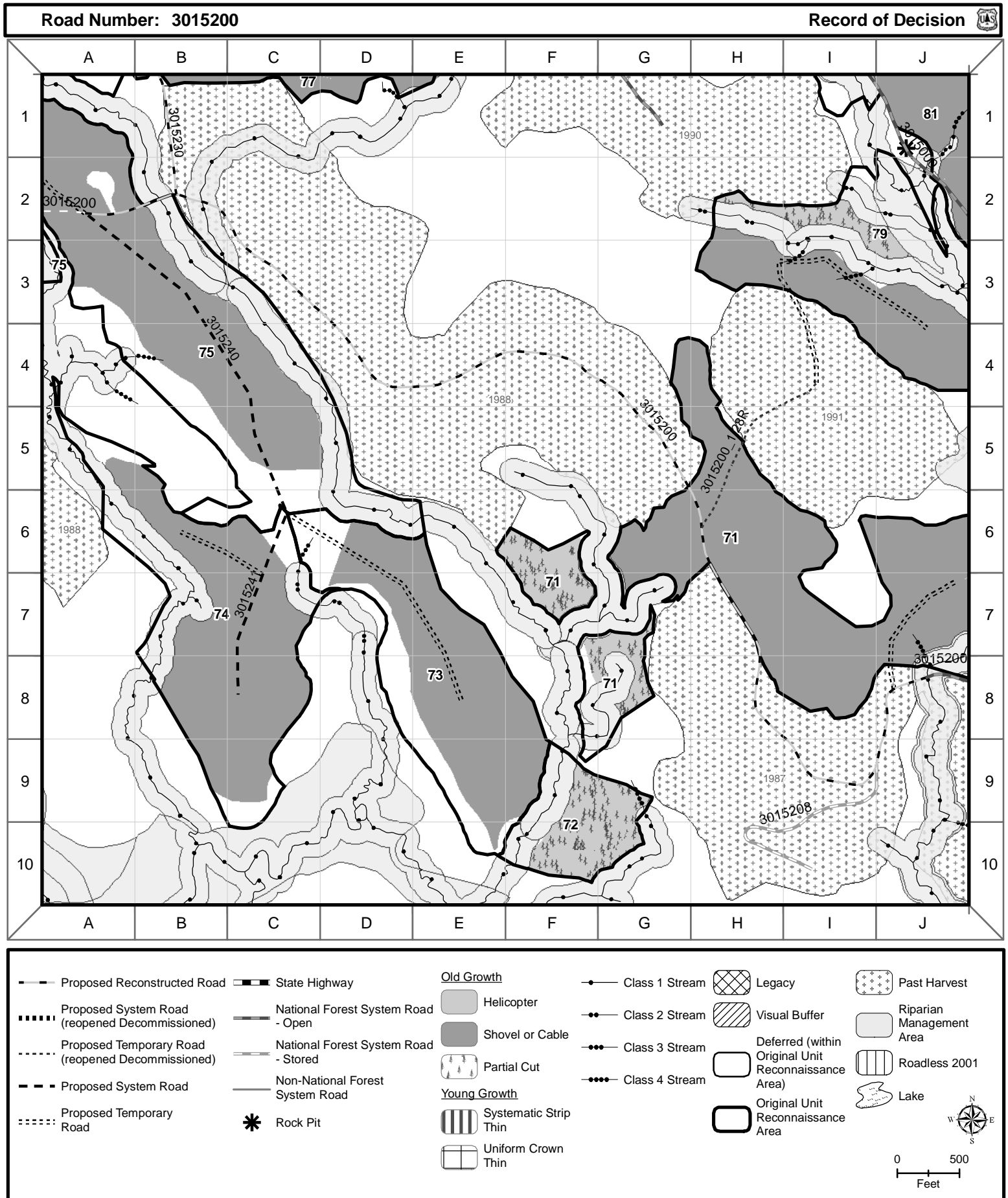
**Invasive Species:** Orange hawkweed, narrowleaf hawksbeard, and common tansy are known along the first several miles of the NFS road 3015000. Monitoring will be done to ensure that the infestations are not spread as a result of project activities.

**Lands/Minerals/Geology/Karst:** No concerns

**Soil and Water:** Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** Recommend road storage as early as possible after harvest operations because of roaded finger that extends into the Thorne roadless area.

**Heritage Resources:** No concerns



# Appendix 2

**Project:**  
Big Thorne EIS

**System:**  
Prince of Wales Island

**Land Use Designation:**  
Timber Production

**Route No**  
3015200

**Route Name**

**Begin Terminus**  
3015200 MP 0.53

**End Terminus**  
Unit 578-075

**Begin MP**  
0.53

**Length**  
1.92

**Status**  
Existing

## General Design Criteria and Elements

<b><u>Functional</u></b>	<b><u>Service</u></b>		<b><u>Design</u></b>			
<b><u>Class</u></b>	<b><u>Life</u></b>	<b><u>Surface</u></b>	<b><u>Width</u></b>	<b><u>Speed</u></b>	<b><u>Critical Vehicle</u></b>	<b><u>Design Vehicle</u></b>
LOCAL	IS	Shot Rock	14'	10	Low boy	Log Truck

## Intended Purpose/Future Use

Access for silvicultural activities; during periods of operation manage as maintenance level 2 open to administrative motorized traffic. After timber sale activities are completed, the road would be placed in storage and would not be designated for public motor vehicle use. During periods of operation the road will be closed to public motorized traffic. Manage as maintenance level 1, storage, between periods of operation, closed to motorized traffic.

## Maintenance Criteria

<b><u>Bmp</u></b>	<b><u>Emp</u></b>	<b><u>Operational Maintenance Level (Current Condition)</u></b>	<b><u>Objective Maintenance Level (Desired Future Condition)</u></b>	<b><u>Alaska Forest Practices Act Class</u></b>
0.53	2.45	2	1	Active during haul, Inactive while stored

## Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; after timber haul road will be stored and maintained in "Inactive" status.

## ATM

STORAGE/FOOT TRAVEL A road or trail that is closed to all motorized vehicles. Road will be surveyed to determine the appropriate storage methods. Each drainage structure is evaluated to determine the appropriate storage strategy. Drainage structures may be removed or bypassed with waterbars to restore natural drainage patterns. Additional water bars or rolling dips may be added to control runoff. Seed and fertilize disturbed soils.

## Operation Criteria

<b>Highway Safety Act:</b>	No
<b>Jurisdiction:</b>	USFS National Forest Ownership
<b>Other System</b>	NFST – National Forest System Trail
<b>Service Life</b>	IS – Intermittent Stored Service
<b>System</b>	NFSR – National Forest System Road



<b>Traffic Management Strategies</b>	<b>Encourage:</b>	N/A
	<b>Accept:</b>	Non-motorized use after road is closed year round.
	<b>Discourage:</b>	N/A
	<b>Prohibit:</b>	N/A
	<b>Eliminate:</b>	Motorized vehicle use after road is closed year round

## Travel Management Narrative:

The road will be constructed primarily for timber transportation needs. The road will be used for future timber management and administration. Intermittent service road, basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. After timber harvest, road will be stored and motor vehicle use will be eliminated. It is open and suitable for non-motorized uses. Road is placed into storage (Maintenance Level I) and is in a self-maintaining status.

Approved /s/ Rachelle Huddleston-Lorton  
District Ranger

June 28, 2013  
Date

Appendix 2

Site Specific Design Criteria  
Road 3015200

Route Basics:

The purpose of this road is to provide access to Units 578-71, 578-73, 578-74, 578-75, 578-77, and 578-87. The proposed road reconstruction has an approximate length of 1.92 miles. The road has an operational maintenance level of 1 and is currently in storage. The road is accessed by existing NFS road 3015000.

Road Location:

Road directly accesses Units 578-71, 578-73, 578-74, 578-75, 578-77, 578-87, and provides landing access for unit 578-72. Grades are favorable to 17%. Location controlled by existing road location. Road location follows BMP 14.2. Install adequate cross drains so as not to impede natural flows (BMP 14.3). During construction follow BMP's 14.6, 14.7, 14.12, 14.14, 14.17, and 14.19.

Wetlands:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

Erosion Control:

During reconstruction activities, avoid putting material into adjacent wetlands (R10 BMPs 12.5, 14.19 and National Core BMPs AqEco-2 and Road-3). The road is planned for storage following harvest (BMP 14.22, CFR BPs 2 and 7, and National Core BMP Road-6). Storage should be adequate to discourage ATVs from crossing streams and wetlands. This road meets the silviculture exemption for 404 permitting through the Army Corps of Engineers.

Rock Pits:

Timing will be required on all pit and r/w blasting within 1/2 mile of known eagle nests. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries or r/w construction near potential unstable sites where ground vibration may induce mass movement (BMP 14.6) Whenever locations near streamcourses or other water bodies are considered, erosion control measures must provide for drainage to run off through a filter strip, buffer, or sediment basin prior to entering a water body.

Stream Crossings:

This road segment crosses three Class I streams and multiple non-stream drainages. Road-stream crossings, stream characteristics, and fish information was based on the most recent RCS data, along with additional survey information. GIS stream locations do not always match the RCS data. A log culvert, log bridge, or bridge will be installed at fish stream crossings. All structures that do not meet fish passage standards (red pipes) would be removed during road storage.

A) MP 0.53	AHMU Class I	Channel Type MMS	Substrate GR-BD
Max. Width 4.8m.	Max. Depth	Gradient 1-2%	
Structure Log Culvert/Bridge	Passage: Yes	Timing dates 7/18-8/15	
Narrative: This crossing is located in cell J8 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Steelhead trout, coho salmon and cutthroat trout presence have been verified. Available upstream habitat is 5,177m, based on GIS. Instream work related to the crossing, if any, will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.			
B) MP 2.34	AHMU Class I	Channel Type PAB	Substrate O-GR
Max. Width 4m	Max. Depth	Gradient 1-2%	
Structure Log Culvert/Bridge	Passage Yes	Timing dates 7/18-8/15	
Narrative: This crossing is located in cell B2 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Steelhead trout, coho salmon, cutthroat trout and Dolly Varden presence have been verified. Available upstream habitat is 1,250m, based on UA surveys. Instream work related to the crossing, if any, will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.			

<b>C) MP 2.40</b>	<b>AHMU Class I</b>	<b>Channel Type LCS</b>	<b>Substrate O-GR</b>
<b>Max. Width 6m</b>	<b>Max. Depth</b>	<b>Gradient 1%</b>	
<b>Structure Log Culvert/Bridge</b>	<b>Passage Yes</b>	<b>Timing dates 7/18-8/15</b>	

**Narrative:** This crossing is located in cell B2 on the road card map. The structure that will be installed at this crossing will be designed to accomplish fish passage. Steelhead trout, coho salmon, pink salmon, cutthroat trout and Dolly Varden presence have been verified. Available upstream habitat is 985m, based on UA surveys. Instream work related to the crossing, if any, will be carried out under current timing restrictions and concurrence from the State will be solicited prior to starting the work.

### **Other Resource Information**

**Timber/Logging Systems:** Evaluate salvage sale opportunities before road storage.

**Wildlife:** Recommend road storage as early as possible after harvest activities are completed, at least beyond Unit 578-71, because of proximity to the Honker Divide Large OGR and the importance of this area to wolves.

**Botany:** No concerns

**Invasive Species:** Orange hawkweed and perennial sowthistle are known along the NFS road 3015200. Monitoring will be completed to ensure that these infestations are not spread as a result of project activities.

**Lands/Minerals/Geology/Karst:** No concerns

**Soil and Water:** At mile post 2.174 there is a cut bank failure that has caused a fill slope failure. Sediment is not being transported into a stream or into the ditch. Area should be reseeded. Apply R10 BMP 14.7 and National Core BMP Road-3. All areas of organic and mineral soil exposed during reconstruction shall be grass seeded and fertilized (R10 BMPs 12.17 and 14.8 and National Core BMPs Fac-2, Road-3, and Road-6). Road is scheduled for storage following timber sale activities. Storage activities typically include culvert removal or bypassing with waterbars to restore natural drainage patterns, water bar placement, revegetating disturbed soils and potential erosion sources (R10 BMPs 14.12, 14.8, 12.17 and 14.22 and National Core BMPs Fac-2, Road-3, Road-6, Road-7, and Veg-2). Minimize channel disturbance during road reconstruction (R10 BMPs 13.16, 14.6, 14.9 and 14.14 and National Core BMPs AqEco-2, Fac-2, Road-3, Road-6, Road-7, and Veg-3). Control erosion and disperse runoff away from streams (R10 BMP 14.8 and National Core BMPs Fac-2, Road-3, and Road-6) and apply any other BMPs determined to be site specifically appropriate.

**Scenery/Recreation:** Because of its proximity to the Scenic River corridor and Snakey Lakes, consider storing road, soon after harvest activities are completed.

**Heritage Resources:** No concerns

## Appendix 2

